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Mah-jong

1   Introduction

Mah-jong is a great game but its scoring system is complex. Needless to say, because of this, many scoring house rules have been developed; meaning that there is no universally agreed scoring protocol for Mah-jong.

The program you have downloaded allows you to fully implement the British scoring system for Mah-jong as defined by the British Mah-Jong Association (BMJA). For a full understanding of the rules adopted by BMJA and their scoring system, please visit this website:

https://mahjong-britishrules.com/

This instruction manual will not attempt to explain the rules of Mah-jong or go into the finer details of scoring the game however it will explain how to use this program and also explain the various house rules you can adopt when using the program.

2   Installing the program

Unlike my other programs, this program does not have an installation file because the complete program is simply the Excel workbook called Mahjong.xlsm. Once you have extracted the Mahjong.zip file that you downloaded from the Bensonium website, simply copy the Mahjong.xlsm file to your documents folder.
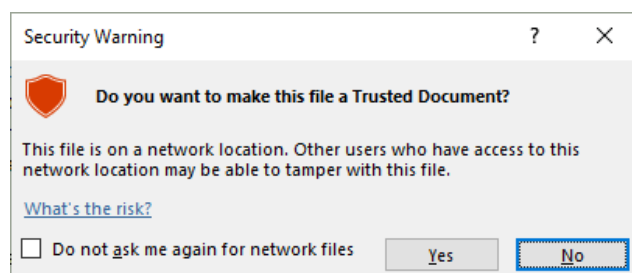
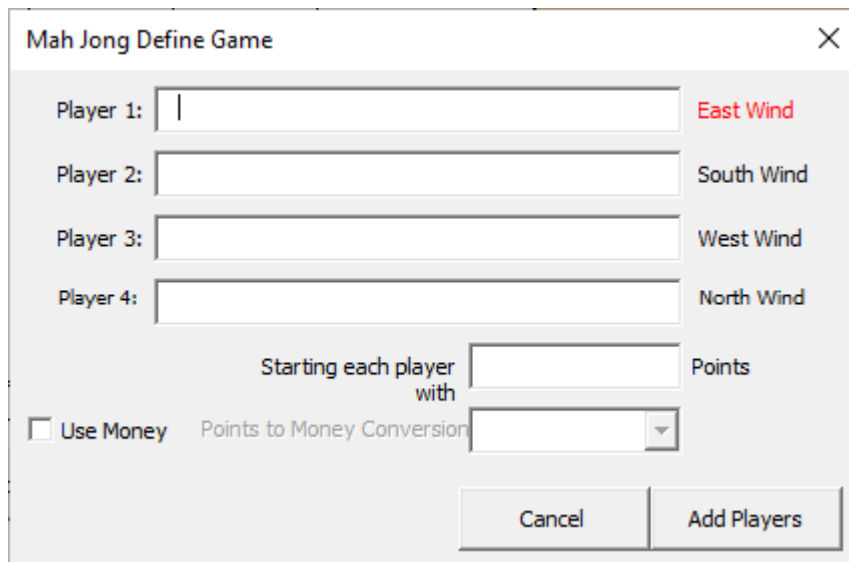When you first open the file, you will get the following message:
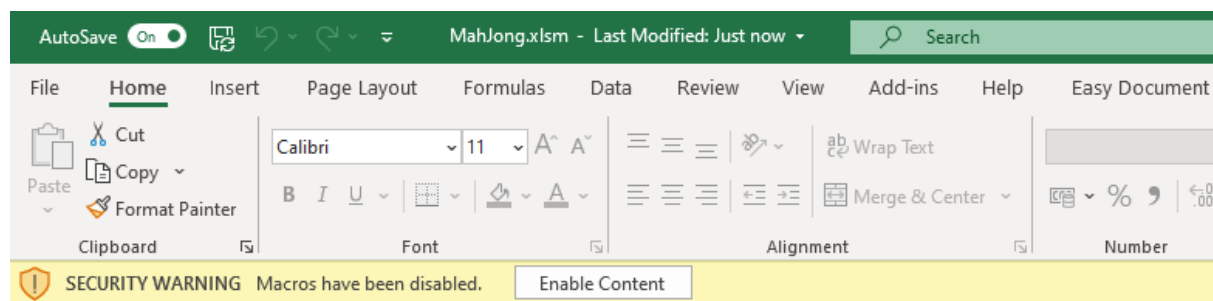
You can safely enable the macros in this workbook. You may also get a second message asking you if you want to make this document as trusted document.

Please say Yes to this prompt as well. And that is all there is to the installation.
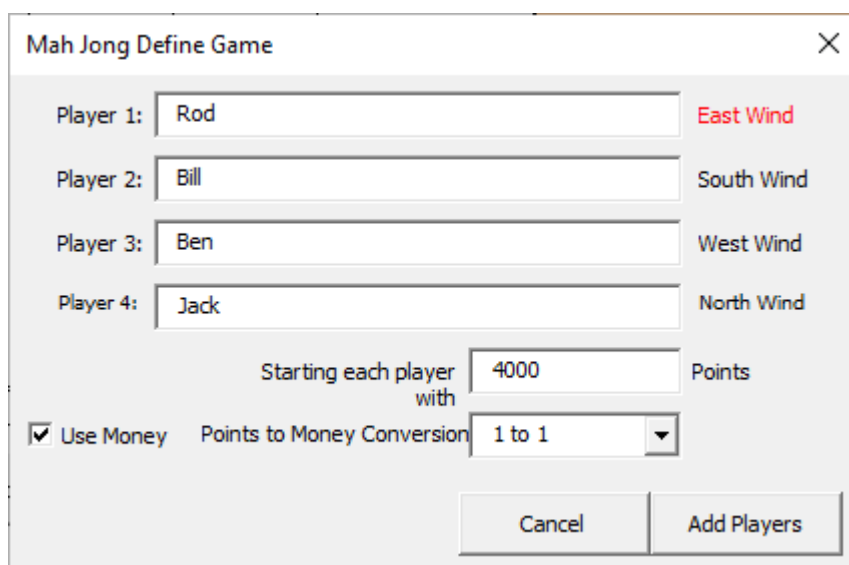
3 Using the program

When you are ready to play the game, select the Mah-Jong Score Sheet tab. Click the button "Define Game" and the following window is displayed:

Enter your players' names and if you want you can start players with a number of points (if you're using standard Mah-jong tally sticks). Alternatively, you might like to use real money rather than tally sticks if you feel brave. If you use real money, I suggest setting the points to money conversion factor at either 100 to 1 (1-point equals 1 penny) or greater. The most conservative conversion factor is 10,000 to 1 which means 1 point is equal to only 0.01 pennies. If you have a set of Monopoly money, this can also be used when playing Mah-Jong and using this program (Figure 1).

Figure 1: In this example I have four players and have indicated that I shall be using money with a 1 to 1 conversion factor because in this game we shall be using Monopoly rather than real money. The maximum score per round in Mah-jong is 1,000 points (see section 3.4

*Maximum Score Limit, page 14) so I have set the starting value at 4,000 which should cover at least 3 to 4 games even if someone scores a maximum score for one round. Remember that East Wind receives and pays double so a maximum score in one round will result in one person either paying or receiving £2000 from another player. Note if you set the conversion factor to less than 1 to 100, and the Mah-jong payment/receipt tally works out to be less than a penny after applying the conversion factor, the amount will be **rounded up** to a single penny so that some money exchanges hands per round.*

Once you have added your players your screen should look something like:

Mah Jong Score						Tiles Score			
Round	Rod	Bill	Ben	Jack		Rod	Bill	Ben	Jack
1	£4,000.00	£4,000.00	£4,000.00	£4,000.00					
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
Total	£4,000.00	£4,000.00	£4,000.00	£4,000.00		0	0	0	0

Define Game | Remove last score | Score Game

Jack

North

Ben | West | *Mah-Jong Table* | East | Rod

South

Bill
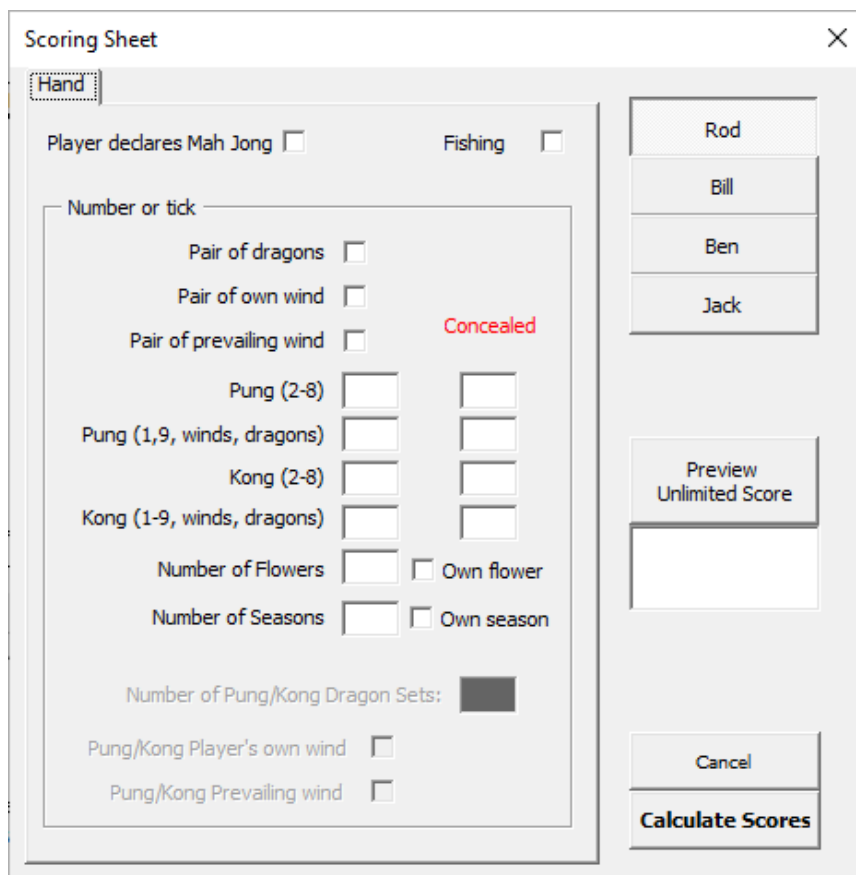
As shown above, the virtual Mah-Jong table has your player's name added to it with their starting positions determined by the order you entered the names into the "Define Game" menu. After each round (assuming East wind does not win the round) the names will rotate clockwise around the table. So in the example, Rod will move to South, Bill will move to West, Ben will move to North, Jack will move to East for the second round.

It is possible to play the game with four, three or even two players (see section 3.11, page 26).

3.1 Scoring a Mah-Jong Round

Once you have completed your first round and are ready to score, simply push the "Score Game" button and the following menu appears:

You are now ready to enter data. At this point I am not going to explain the meaning of all the different tiles scores. If you need information on basic scoring of Mah-Jong please visit the following website: https://mahjong-britishrules.com/scoring/working-out-the-scores

In terms of Mah-jong it is only possible to have 4 sets of 3 tiles (all same suit and number: known as a pung) or 4 tiles (all same suit number known as a kong). You can also have a run of three tiles (say 1, 2, 3 all same suit) which is known as a chow but this is worth no points and so is not recorded in the scoring program. Four sets of three/four tiles (pungs/kongs) makes between 12 to 16 tiles respectively. Along with these tiles there are two extra ones which constitute a single pair to finish off your standard Mah-Jong hand, unless you have a special hand (see section 3.5 Scoring Special Hands, page 15).

So this means that the maximum sum value of all numbers entered in the 8 (2 x 2 x 2) numerical boxes (minor/major, pungs/kongs, exposed/concealed) is **4**. The program stops you entering non-sensical data by keeping track of this total and only allowing it to be 4. So, for example, if I enter two exposed Pung (2-8), one concealed Pung (2-8) and one exposed Kong (2-8) the program menu will look like Figure 2.
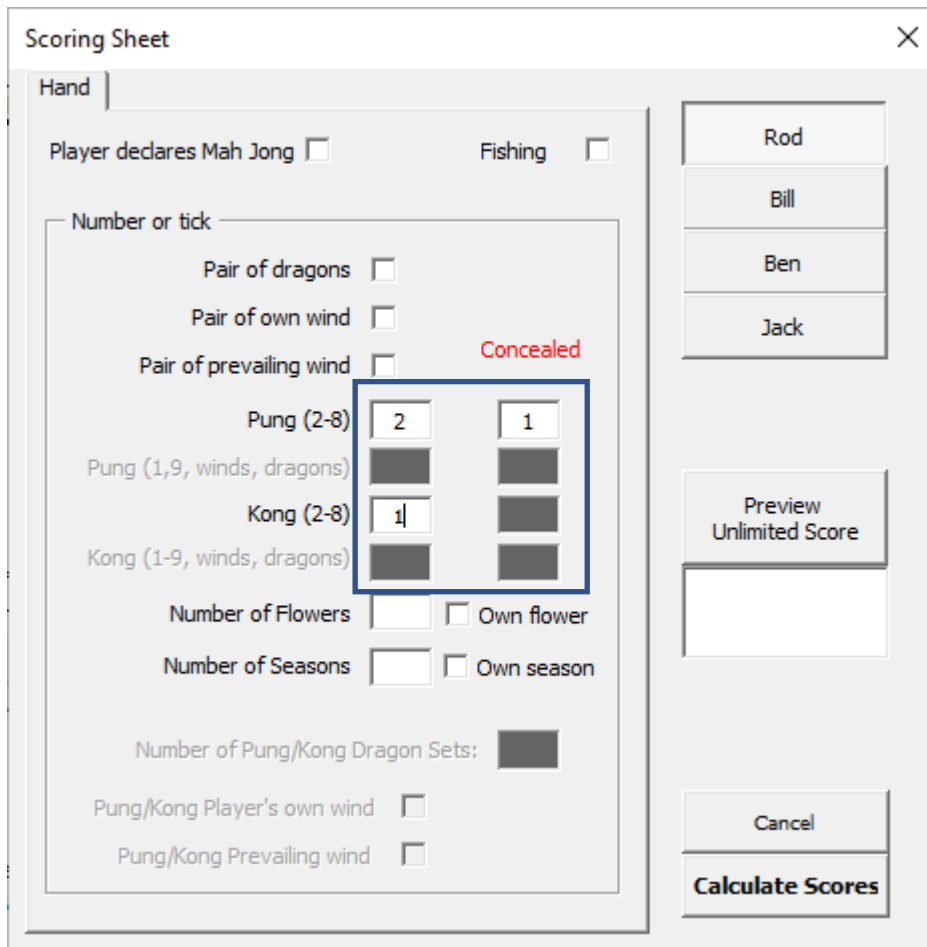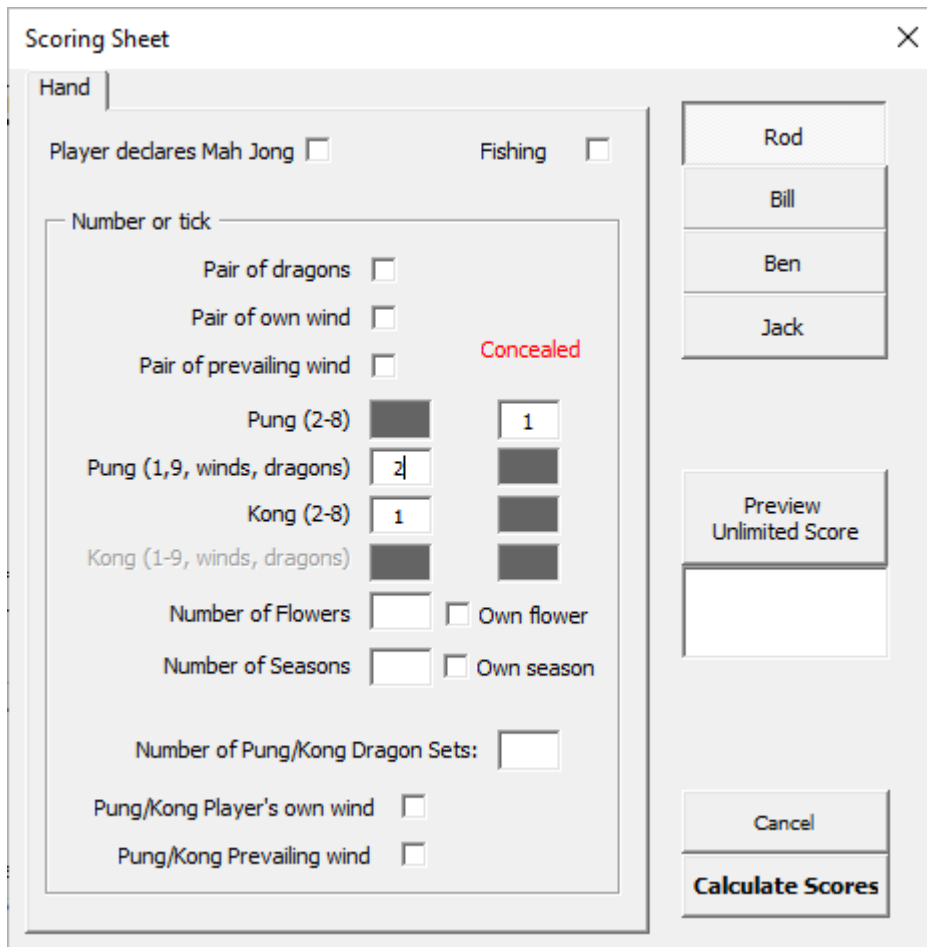
Figure 2: The 8 fields inside the blue square is where you entered your possible pung/kong, major/minor, exposed/concealed tile score. Once the total number of pungs/kongs entered equals 4, all other boxes inside the blue square are disabled so you cannot enter nonsensical data. Likewise, if you started with an empty menu, then the data entry boxes allow you to type any number from 1 to 4. If you try to type the number 5 (or any letter), your keystroke is simply ignored. However, once you have entered 1 in your first data entry box, the next box will only accept the numbers 1 to 3 because if you could enter a 4, the overall total would now be 5 which is impossible. This way the program is stopping you from entering incorrect scoring data for each individual player.

Note in the example above, the "Number of Pung/Kong Dragon Sets", Pung/Kong Player's own wind" and Pung/Kong Prevailing wind" are stilled inactive and greyed out because these are all major tiles and you have indicated that all 4 of your sets were minor tile sets. If we now move the number 2 from the "Pung (2-8)" entry box to the "Pung (1,9, winds, dragons) entry box, you will see all three greyed options now enable as shown in Figure 3.
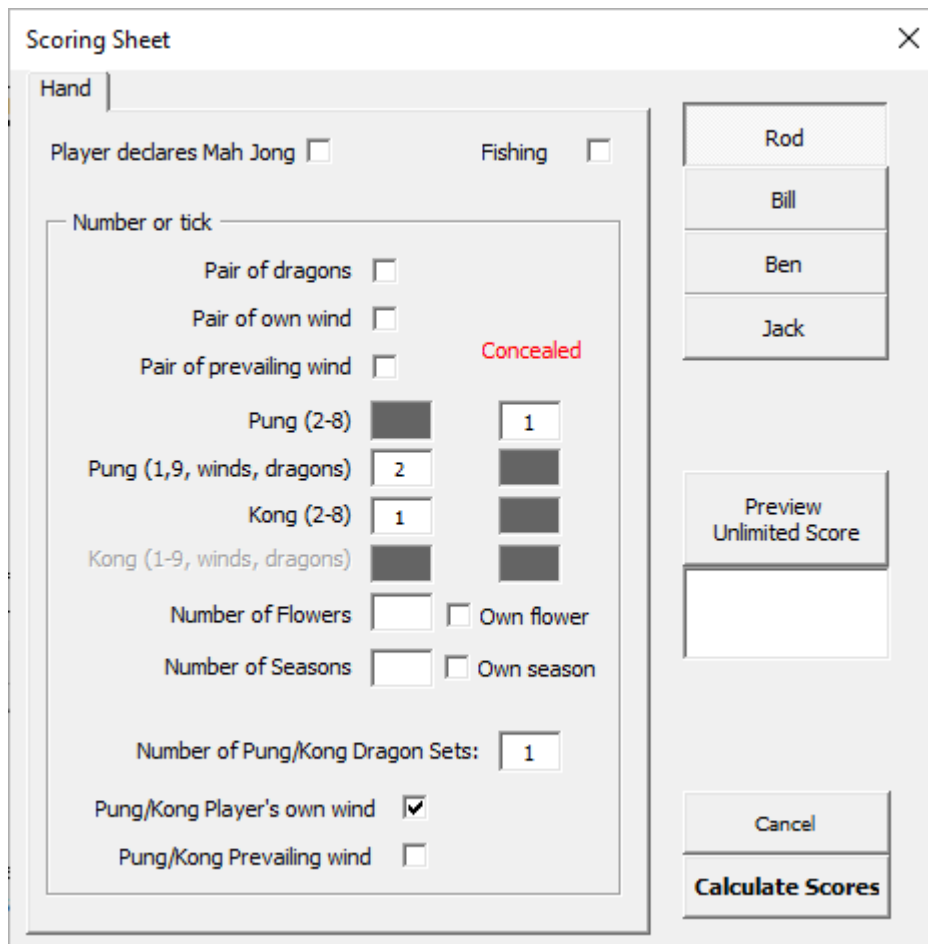
Figure 3: The total of pungs/kongs in this example is still 4 so all the remaining 6 fields, where the other tile combinations are entered, are inactive and greyed out. However, because 2 of the pungs are now major tiles, the program allows the user to indicate if any of these are dragon sets or a pung/kong of winds which are either the player's own wind and/or the prevailing wind.

Now in this instance the maximum possible of pung/kong Dragon Sets can only be 2. However, if you indicate that one of these major tile sets was the Player's own wind then the only possible number that is allowed to be entered into the "Number of Pung/Kong Dragon Sets" is the number 1. If you try to enter any other number into the "Number of Pung/Kong Dragon Sets" box, your key entry will be ignored. However, if you now uncheck the "Pung/Kong Player's own wind" box, you can once again enter the number 2 in the "Number of Pung/Kong Dragon Sets" because 2 now balances with the number of "Pung (1,9, winds, dragons)" that you entered above.

Finally, if you have the number of "Pung/Kong Dragon Sets" equal to 2 and you re-tick the "Pung/Kong Player's own wind" option, then you will see the "Number of Pung/Kong Dragon sets" changes to the number 1. In this way, the program keeps a careful track of the data you are entering into each scoring field to make sure you do not enter inconsistent data for any individual player. This is the first phase of managing the fidelity of the data you are entering. When you push the "Calculate Scores" button there is a second phase of data

checking where the numbers entered for each player are checked according the total number of tiles available (see section 3.7, page 19).

Another example of integrity control is the inability to tick both "Pair of own wind" and "Pung/Kong of Player's own wind" as these two events are mutually exclusive. If you tick the "Pair of own wind" then the "Pung/Kong of own wind" will untick and vice versa.

Figure 4: In this instance the maximum number of dragon pung/kong sets can only be 1 because you have indicated that you have a pung/kong of the player's own wind and you only have an available a total of two pung major tiles as indicated by the number 2 entered into the box next to the label "Pung (1,9, winds, dragons)".
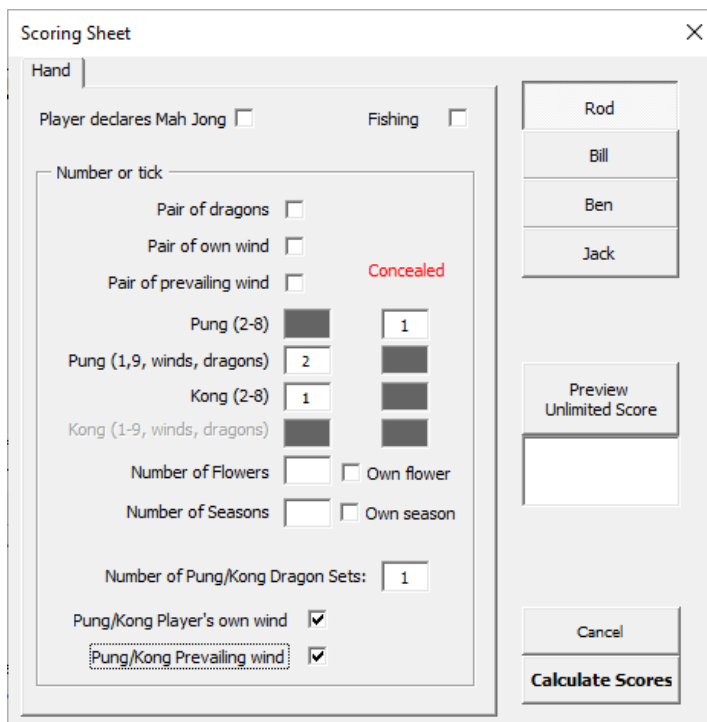
While I have made every effort to limit non-sensical data, it is still up to the user to think about the data they are entering because it is not possible to stop every incorrect entry. For example, because it is possible for the prevailing wind to also be the player's own wind, ticking both "Pung/Kong Player's own wind" and "Pung/Kong Prevailing wind" still allows you to have one "Pung/Kong Dragon set" because ticking both wind options could be referring to the same tile set. However, if the prevailing wind **is different** from the players own wind, then ticking both boxes in this instance refers to two different pungs/kongs tile sets. The program cannot know this so in this instance entering one extra pung/kong Dragon set would be a scoring error that will not be detected by the scoring program (Figure 5).

The BMJA rules state that only one chow is allowed per Mah-jong. If this rule were enforced in my program then the Mah-jong option wou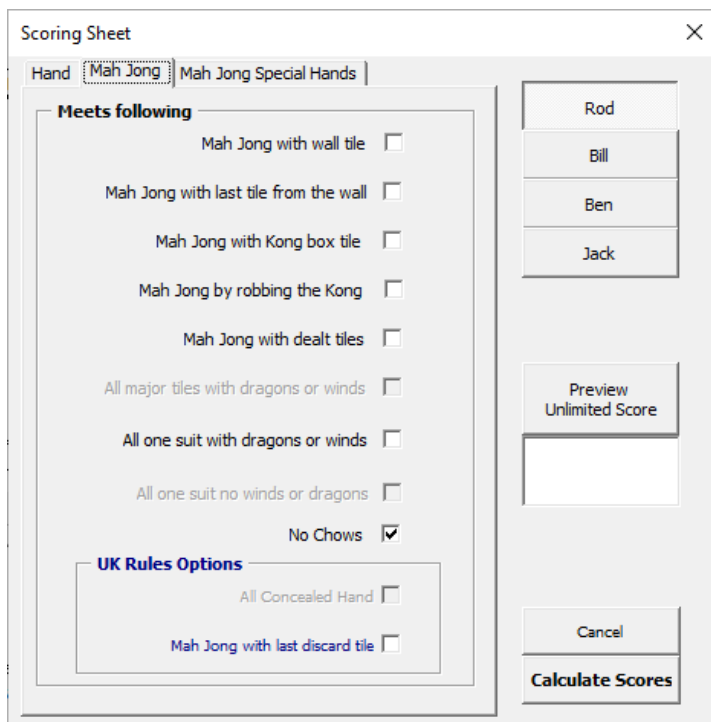ld be disabled until you have 3 pungs/kongs entered across the 8 data entry fields. However, there are plenty of versions of Mah-Jong where the single chow rule is not enforced. In fact in some house rules, a Mah-Jong consisting purely of chows is not only permitted (and is worth the standard 20 points for mah-jong) but it also attracts a single doubling bonus making the score 40 (assuming no flower or season tiles). Because the non-tile scoring Mah-jong doubling bonus is not part of the BMJA rules, and in fact contradicts the single chow rule, the non-scoring doubling bonus is not implemented in my program. Thus, while you can choose to ignore the strict rule of only one chow per Mah-Jong, if a player Mah-Jong's with all chows and a non-scoring pair, the program will simply award that player 20 points before adding on any flowers or season bonuses. If you must award the player a bonus for this Mah-Jong chow monstrosity, you can use the work-around of changing the Mah-Jong score temporarily to 40 just while you score that round (see section 4.2, page 28 for further details about changing default score values).

3.2   Scoring Options for the player who went Mar-Jong

Hopefully, one of the players has successfully gone Mah-Jong so it is now time to indicate which one by clicking the "Player declares Mah Jong" option at the top of the scoring menu. When you do this, two extra tabs appear for that player. This allows you to enter the Mah-Jong specific information for that score (Figure 6).

Figure 5: An example where this score is only correct if the player's own wind is also the prevailing wind. The program allows you to enter these data because this is possible. However, if the player's own wind is different from the prevailing wind then these data are inconsistent because you have two pung/kongs of winds and one dragon pung/kong (total 3) but the number of major tile pungs is only two and you have no major tile kongs.

Figure 6: The Mah-Jong tab for the player that went Mah-Jong. Once again, depending on what you have indicated for the player's hand score, certain options will be available and certain options inactive. In our example, we indicated a total of 4 pungs/kongs which means that this Mah-Jong contained no chows so the program has indicated this on the Mah-Jong tab. However, because the Mah-Jong consisted of minor pungs/kongs, the major tile option is disabled along with the no dragons or winds options (purity) because we have indicated on the previous scoring page, that we had 1 pung/kong of dragons and one of our own wind. Finally, the "All concealed Hand" option is disabled as this would require all 4 pungs/kongs to be in the concealed column on the "Hand" menu page.

The Maj-Jong tab consists of options which result in doubling bonuses. These include unusual Mah-Jong scenarios like a Mah-Jong with last tile from the wall and some special Mah-Jong tile structures. For example, all one suit with dragons or winds or all major tiles with no dragons or winds (this hand is known as purity and attracts a multiplication score of 8). Depending on what data you entered on the first page of the scoring menu, the program will determine which options on the Mah-Jong tab are available so that the scoring information is kept consistent. In our example let's select "All One Suit with Dragons or winds" and "Mah Jong with wall tile". Now push the Preview Unlimited Score button and assuming your information matches mine in the "Hand" and "Mah Jong" tabs, the total tile score will read 672 as shown in Figure 7.
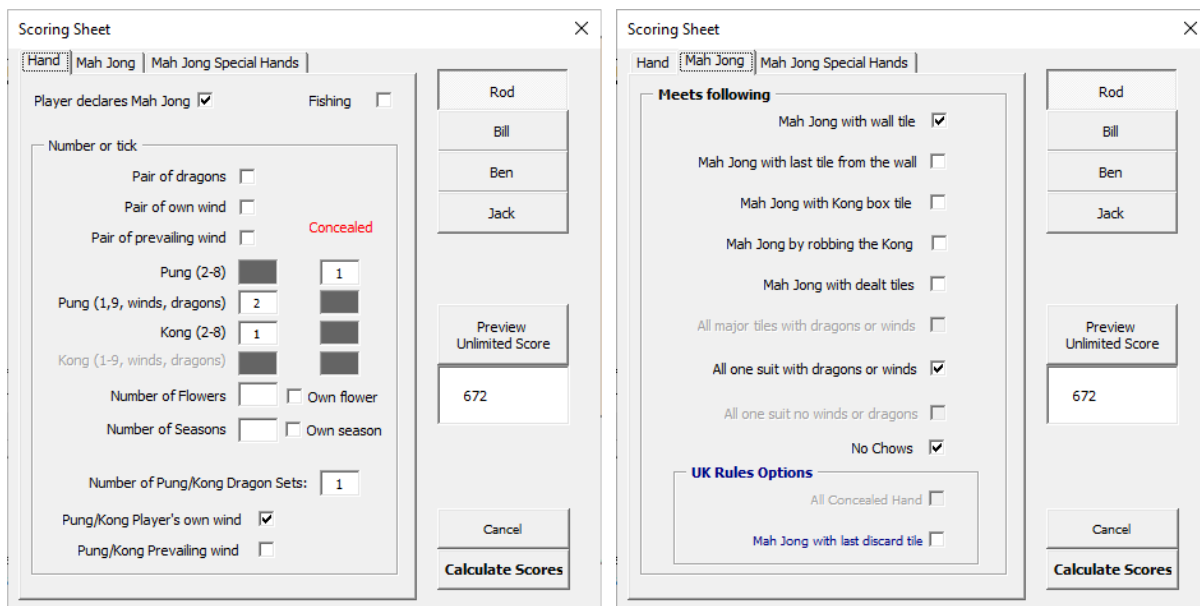
Figure 7: A Mah-Jong score calculated by the Mah-jong scoring program. The score is derived as follows: 1 concealed pung equals 4 points, 2 major pungs is worth $2 \times 4 = 8$ points and 1 minor kong is worth 8 points. This total equals 20 points. We now add 20 points for going Mah-Jong plus 2 points for getting Mah-Jong from the wall tile bringing the total to 42 points. The score is then doubled for having a pung of dragons, doubled again for a pung of own winds, doubled again for all one suit and double again for no chows. The final score is thus $42 \times 2 \times 2 \times 2 \times 2 = 672$.

3.3   Maximum possible Mah-Jong Score

Taken from https://mahjong-britishrules.com/scoring/highest-possible-score

We will enter this into our program as follows. Let's put this score under our second player Bill.

We have a pair of white dragons, four major concealed kongs, all the flowers (called a bouquet of flowers) and all the seasons (a year of seasons). We have two kongs of the other dragons (green and red) and a kong of the East wind which in this round happens to be both

the prevailing and Bill's own wind. If we now switch over to the Mah-Jong tab, the computer has already automatically ticked (based on the information we supplied on the first page) the "No Chows", "All Concealed hand" and the "All major tiles with dragons and winds" options. However, Bill made the Mah-Jong from the lose tile (kong box) so this option also needs to be manually ticked. Finally, the hand has exactly one suit so you should also tick the "All one suit with dragons or winds" as shown in Figure 8.
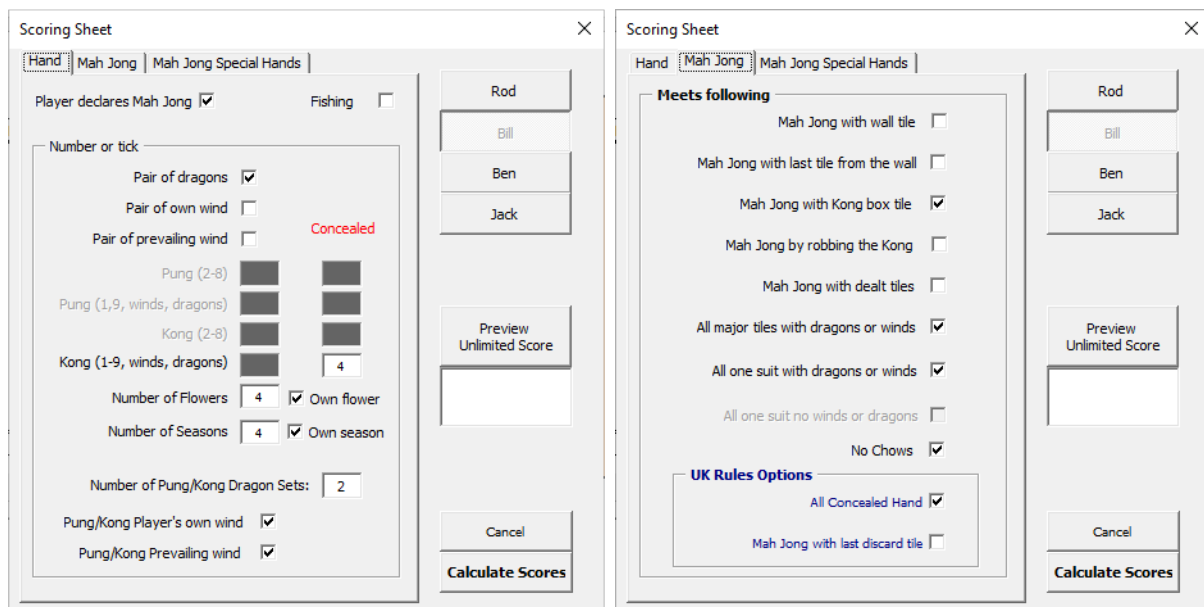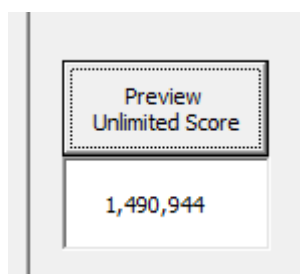

Figure 8: Scoring an example taken from the webpage https://mahjong-britishrules.com/scoring/highest-possible-score.

Once all these details are entered, push the Preview Score button and be amazed as the following score is revealed:

The reason the score is so large is because in Mah-Jong doubling is applied to the base score depending on it meeting certain requirements. In this instance, the score has been doubled 13 times. This is how the score has been calculated. First the base score is:
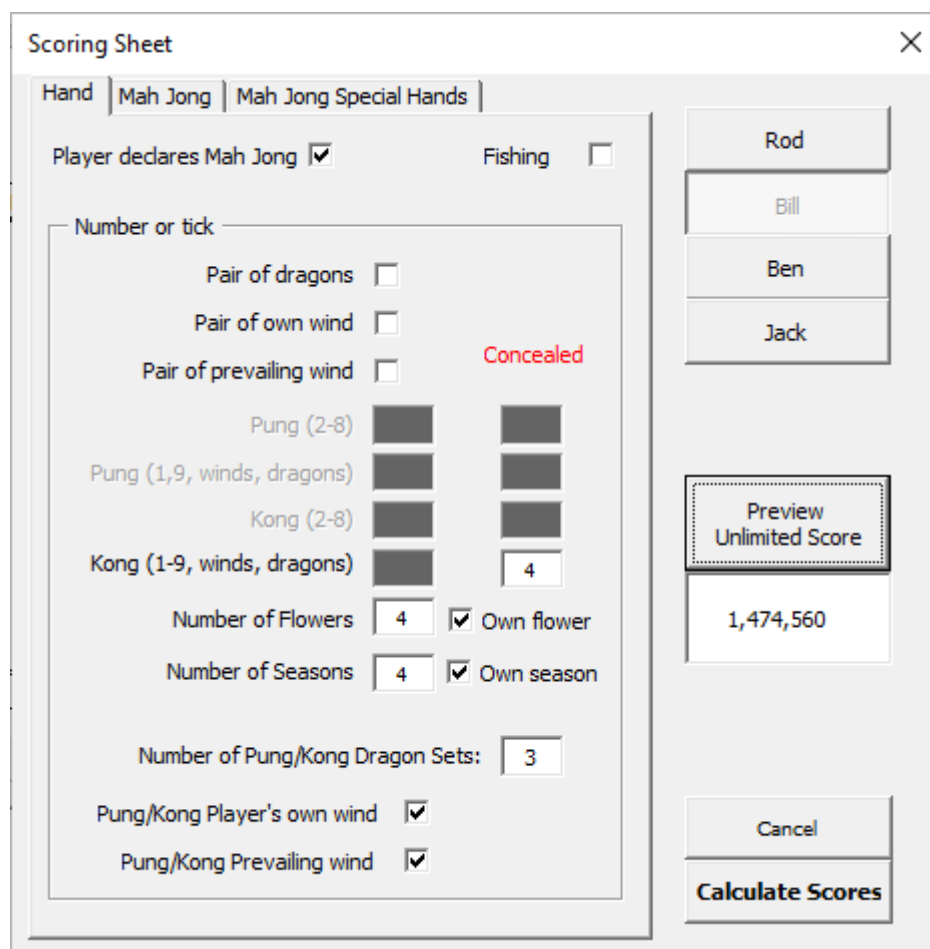
$$4 \times 32 \ (concealed \ Kongs) + 2(white \ pair \ of \ dragons) + 16(4 \ flowers) \\ + 16(4 \ seasons) + 20 \ (for \ going \ mahjong) = 182 \ points$$

The score is doubled for own wind, doubled again for prevailing wind, doubled again for suit consisting of all ones and nines, doubled again for kong of green dragons, doubled again for kong of red dragons, doubled again for all same suit with honour tiles, quadrupled[1] again for

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[1] Doubled for own flower and doubled again for having all 4 flowers

bouquet of flowers, quadrupled[2] again for year of seasons, doubled again for all the hand being concealed, doubled again for no chows and finally doubled one last time for going Mah-Jong with a loose tile (from the kong box). This means that the base score of 182 is multiplied by $2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 4 \times 4 \times 2 \times 2 \times 2 = 2^{13} = 8,192$. So the final tile score is $182 \times 8,192 = \mathbf{1,490,944}$.

Is there any way of getting a higher score than that? Well you might think what about if I convert my pair of dragons to another kong so I have 3 kongs of dragons and one kong of my own and prevailing wind? Would this not result in a higher score? Well let's see. We return to the Hand tab and untick "Pair of Dragons" which then allows us to enter the number 3 in the "Number of Pung/Kong Dragon Sets" as shown in Figure 9. Yet surprisingly, the total is around 16,000 points less (what's 16K between friends) as shown in Figure 9,
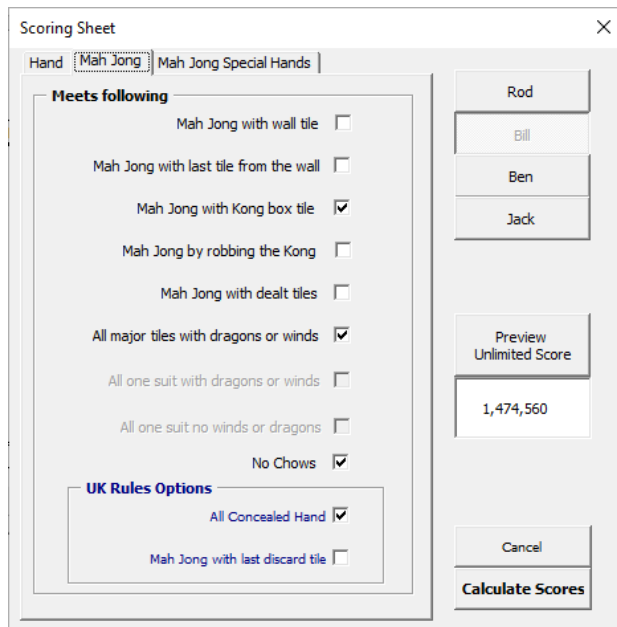

Figure 9: The effect of changing one of the kongs from a single suit to a final kong of dragons. This results in a lower score than what we had before (see text for further details).

You can see why this change scores less if you switch over to the Mah-Jong tab (Figure 10). The previously ticked "All one suit with dragons or winds" is now unticked and greyed out because this hand no longer contains any of the three suits but rather *only* dragons and winds. Hence while we *gained* an extra doubling in terms of an extra kong of dragons, we

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[2] Doubled for own season and doubled again for having all 4 seasons

lost it again because we now have a hand with no suits, only special tiles. Yet if we gained a multiple of 2 and lost a multiple of 2, why does this not just cancel out to give the same score? Well in the base score a pair of dragons is worth a meagre 2 points. However, when 2 is multiplied by 8,192 it equals 16,384 which is the difference in scores between the hand with the pair of dragons and the three kong dragon hand.
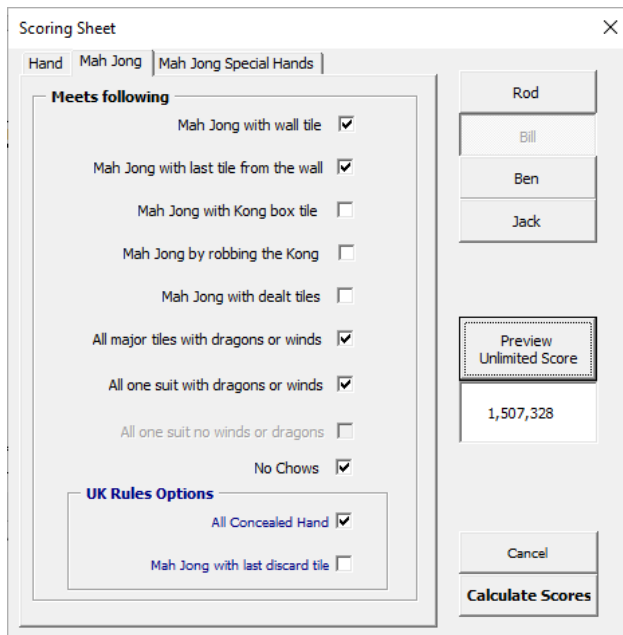

Figure 10: Although adding a third kong of dragons resulted in another score multiple of 2, we lose a score multiple of two because our hand no longer has any suit tiles so the option "All one suit with dragon or winds" no longer applies. Because we no longer have a single pair of dragons which adds 2 to our base score, our new score is actually more than 16,000 points less than the one with a dragon pair because of the two being multiplied by the large multiplication factor of 8,192.

So is there is a way to get a higher score than the one in Figure 8? Yes there is if we stick to the Figure 8 scoring scheme but this time tick the Mah-Jong with a wall tile (worth an extra 2 points on the base score) and the Mah-Jong drawn from the last wall tile (worth a multiple of 2). In this instance, you must lose the multiple of 2 that resulted from drawing the tile from the kong box so you are still left with the same 13 multiples of 2. Yet the new value now exceeds the value in Figure 8 by $2 \times 8,192 = 16,384$.

My strong suspicion is that this is **truly the highest Mah-Jong** that is theoretically possible.

3.4   Maximum Score Limit

Due to the possibility of these insanely high Mah-Jong scores, it is normal practice to set a maximum round limit that an individual can achieve. This limit is normally set at 1,000 points and this is the limit that is set in this workbook although it can be changed if desired (see section 4.1 Round Limit, page 28)

Thus, when we push the "Calculate Scores" button, after possessing a raw Mah-Jong score of 1,507,328, poor old Bill only scores a single 1,000 points for his efforts as the score is clipped back to the maximum round limit. Such a round may end up looking like this:
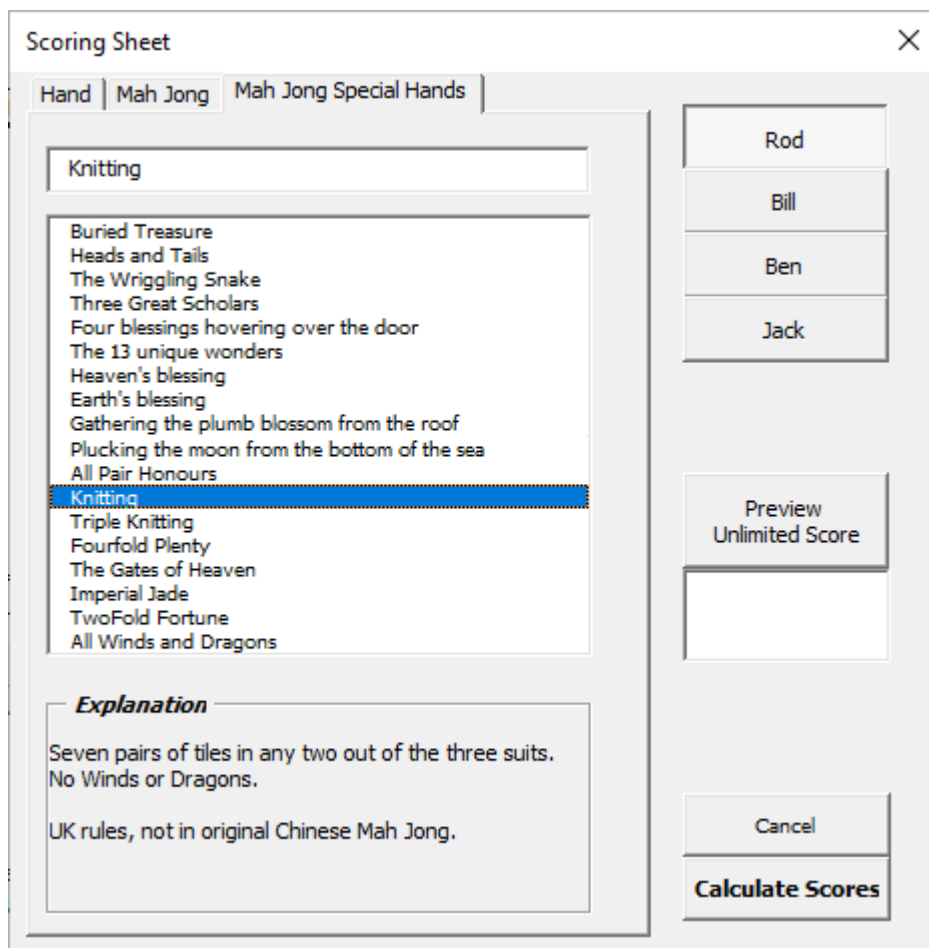

Figure 11: Even though Bill's raw Mah-Jong score for this round was over 1 million points, the round limit has now been applied meaning that the score entered for Bill in the score table is 1,000 points.

3.5   Scoring Special Hands

Along with the standard Maj-Jong hands, there are a number of Mah-Jong special hands (see https://mahjong-britishrules.com/scoring/special-hands) for more details. I have also included a list of these Special Hands on the "Special Hands Chinese" and "Special Hands British" worksheet tabs of the scoring program. If the player has achieved one of these Special hands, unless it is one of the British hands that earn 500 points, it is not worth recording the tile score because these hands attract the full limit score of that round. Therefore, you can simply tick the Mah-Jong tab and then go to the Mah-Jong Special Hands tab where there is a list of Special Hands for you to select. In Figure 12, I have selected the special hand knitting which is a UK specific special hand that scores 500 points. When you select each possible special hand an explanation of that hand appears in the explanation box. If you push the Preview score at this point you will see it scores 500 points. Note that the special hand information overrides most of tile information entered in the "Hand" tab as the special hands are stand-alone awards.

Figure 12: Mah-Jong special hands option with the knitting special hand selected.
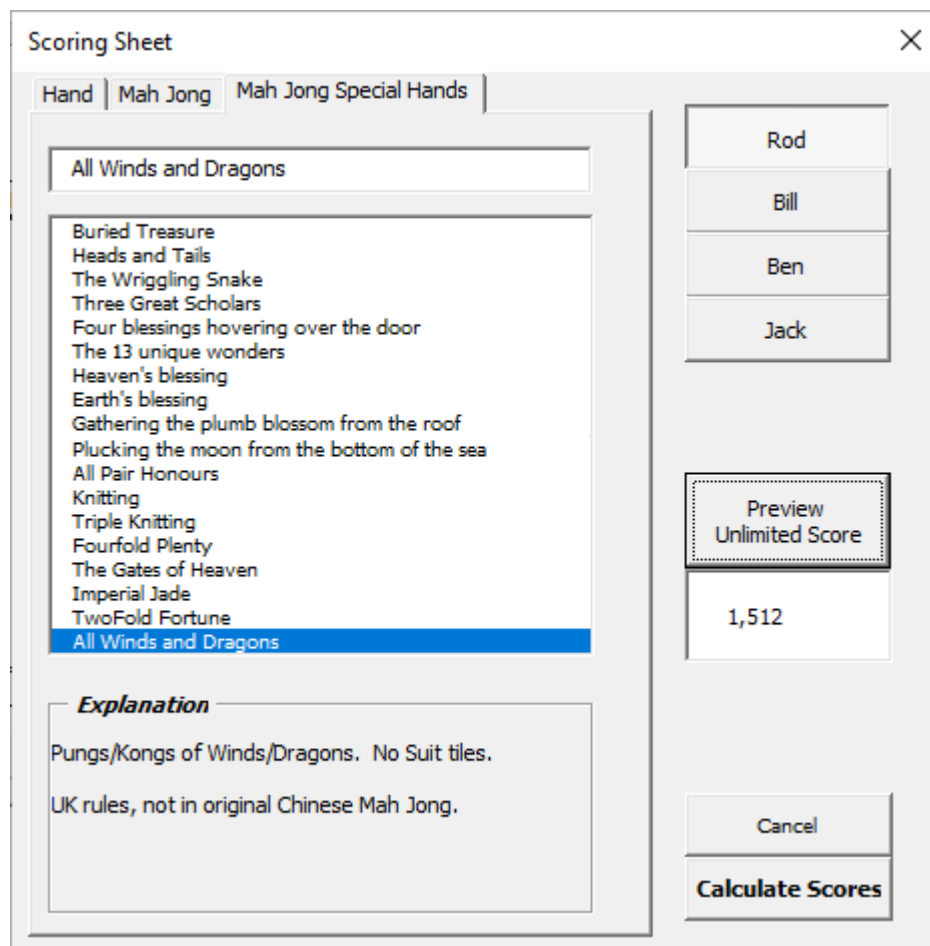
To show you what I mean by this, let's return to our very high scoring hand above this time with three kongs of Dragons and a single wind that happens to be both the prevailing and also the player's own wind. The player had a bouquet of flowers and a year of seasons.

Remember this score came out to 1,474,560. Yet this hand also meets the special hand description of All Winds and Dragons. If we switch over to the Special Hands tab and select All Winds and Dragons and then push the "Preview Unlimited Score" button, a score of 1,512 points is shown because this is the value of this special hand (1000) plus the value of the 4 flowers and 4 season tiles, multiplied by their doubling bonuses relating to the flowers and season components of the original Mah-Jong score.

The flower/seasons component of the score is: $[4 \times 4(flower\ value) + 4 \times 4(season\ value)] \times 2(own\ season) \times 2(own\ flower) \times 2(bouqet\ of\ flowers) \times 2(year\ of\ seasons) = 512$ which is added onto the special hand score of 1,000 to give a final total of 1,512 points (Figure 13).

Remember however, because the special hand of "All winds and dragons" is set to the round limit, like the huge original Mah-Jong score of 1,474,560 the more modest 1,512 points is also reduced back to the limit of 1,000. Therefore, as mentioned above, it is not normally worth bothering to score the flower and seasons components of the Mah-Jong score if the special hand score is already at the limit of the round.

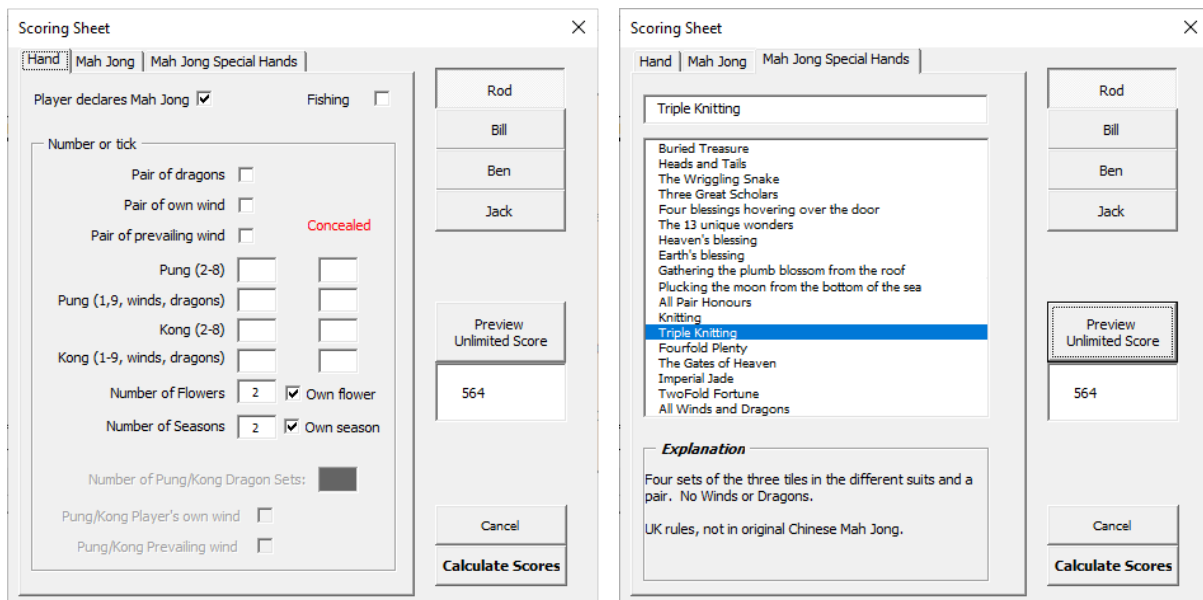*Figure 13: The unlimited score of an all winds and dragons special hand which also includes a bouquet of flowers and a year of seasons (see main text for further details).*

In relation to the special hands that only score half the limit of the round, then including the information for any seasons and flower tiles collected is relevant because this will increase

the score above 500 but it will still be below the round limit of 1,000. As a final example if a player gets knitting (500 points) but also has 2 seasons and 2 flowers and they also have their own season and own flower then their overall score will be $500 + [2 \times 4(season\ value) + 2 \times 4(flower\ value)] \times 2(own\ flower\ bonus) \times 2(own\ season\ bonus) = 564$.

Very strangely, the only other bonus double that is included in the flower/season part of the mah-jong score that is added to a special hand (**as stipulated by the BMJA rules**) is if the mah-jong was made from **the final discard tile** which itself is a British Mah-Jong specific bonus. The BMJA rule state that this and only this final doubling bonus should also be added to the flower and season part of special hand Mah-jong score. Therefore, in the unusual situation where a player goes Mah-jong with the last discard tile and a special hand that only scores 500 points (knitting, triple knitting, all pair honours) then you should tick the "last discard tile" option on the Mah-jong tab to increase the player's score from 500 to 628 ($500 + 64 \times 2 = 628$) as shown in Figure 15.

Figure 14: An example of why, if the special hand is less than the score limit, it is important to also enter if the player has any bonus flower or season tiles as these components of the Mah-Jong tile score are added to the special hand unit total (for more information see https://mahjong-britishrules.com/scoring/special-hands).
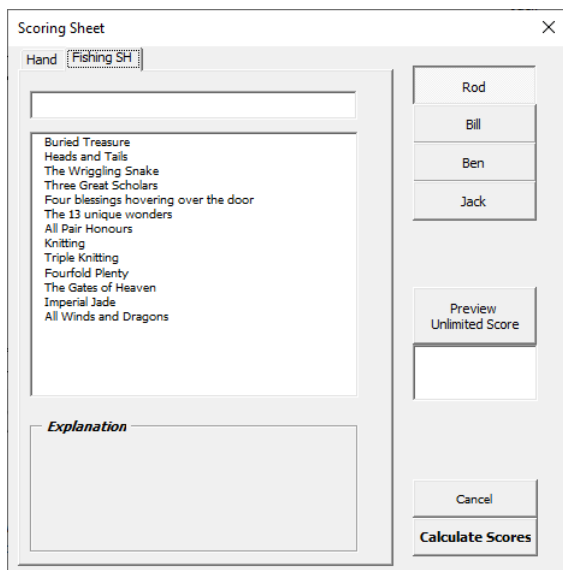
Figure 15: An unusual example where it is necessary to indicate the UK option that the Mah-jong was achieve with the last discard tile (circled central panel) as this doubling bonus is applied to the flower and season component of the Mah-jong special hand score (see main text for further details and also this web address https://mahjong-britishrules.com/scoring/working-out-the-scores#Doubling-and-Special-Hands.

3.6   Special Hands Fishing Score

The British Mah-Jong association rules include the concept of fishing for special hands. If a player is one tile a way from either a special hand or Mah-Jong, they must call fishing. If they are one tile away from a special hand but someone else goes Mah-Jong, the hand still scores 40% of its full value. So if the losing player is one tile away from the "wriggling snake" they would score 400 points for that round. Likewise, one tile away from knitting would score 200 points. To indicate that a losing player was one tile away from their special hand, simply tick the Fishing option (note the program will not allow the Mah-jong and fishing options to both be ticked for obvious reasons). The menu tab Fishing SH will then appear and selecting this tab brings up a very similar tab to the Special Hands Mah-jong tab as shown in Figure 16.

Note that there are less special hands shown in the fishing list box because some of the special hands in Mah-jong like "Twofold fortune" or "Plucking the moon from the bottom of the sea" or "Gathering the plumb blossom from the roof" are all Mah-Jong hands gained through unusual tile draws and so there are no equivalent fishing version of those hands. Because all fishing hands score well below the round limit, to score these hands properly, make sure you include the appropriate number of bonus flower and season tiles.
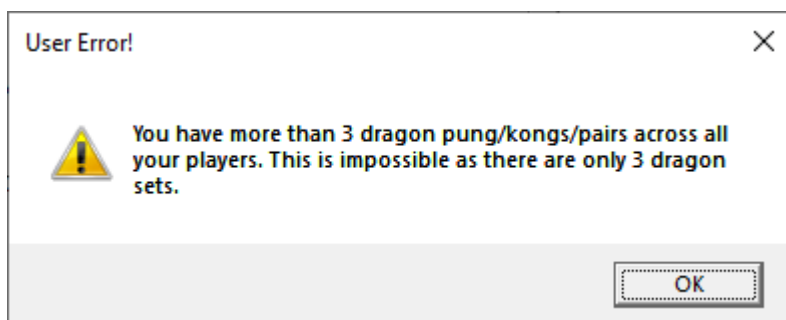
Figure 16: The special hands that are available for players who did not achieve Mah-jong but were one tile away from achieving their special hand.

3.7   Second phase data integrity checking

Once the tile information for all your players has been entered, push the "Calculate Scores" button. The scores will then appear in the score sheet table or you may at this point get an error message if the data you entered is inconsistent. While the data entry menu pretty much ensures you can't enter more than 4 tile scores, there are other checks that are required to make sure that there is no conflicting information when all the players scores are considered as a whole.

This second phase of checks begins by first confirming you have not entered too many dragon pairs/pungs/kongs as there are only 3 dragon sets in the whole game so it would be impossible for two players to have two pungs/kongs of dragons because this would require 4 not 3 dragon sets. If you have made this error the following error message is displayed.

Likewise, because there is only one prevailing wind the next check performed is that only one player has a pung/kong of prevailing winds or only two players have a pair of prevailing winds.
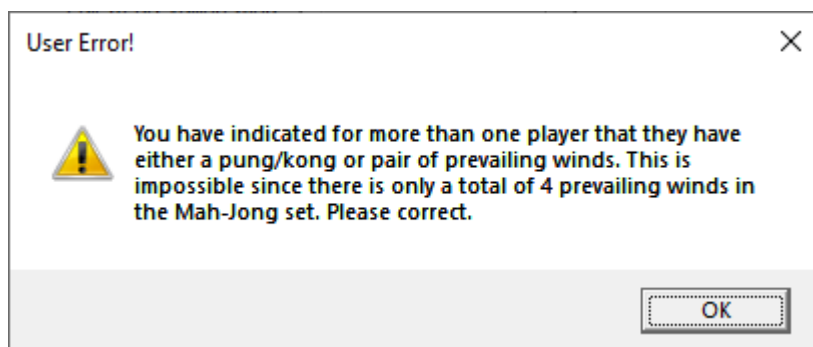
The third integrity check is that only one player has obtained Mah-Jong. If you ticked Mah-Jong for multiple players, then the follow error will be displayed:
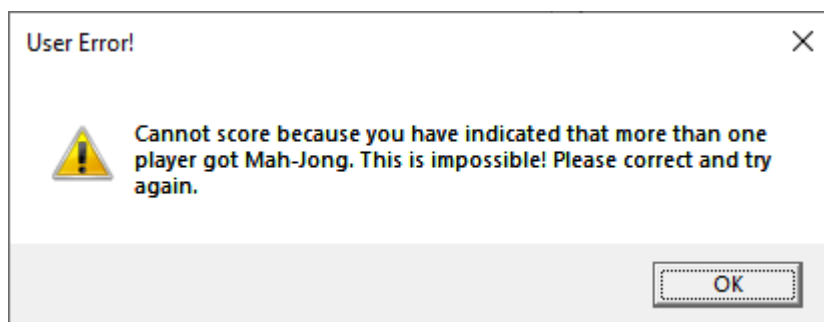
However, it is possible for no player to obtain Mah-Jong when all the wall tiles to run out. When this happens, the game is considered a draw with no players gaining a tile score or tally sticks/money exchanging hands. This can be quite a frustrating scenario, so I have created my own house rule which allows players to calculate a tile score and also tally up, even if no player achieves Mah-Jong.

Therefore, if the program detects no player has achieved Mah-Jong, the following message is displayed:
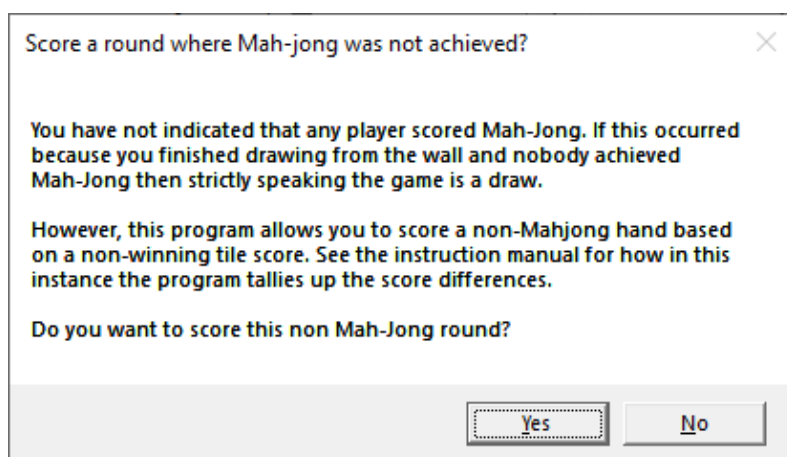
Figure 17: The no player scored Mah-Jong error gives you the option of scoring the round anyway. The details are discussed in section 3.10, page 25.

If you are playing strictly by BMJA rules, then you would select No to this prompt and the round would be void. However, if you select Yes then the round will be scored and recorded as discussed later in section 3.10, page 25.
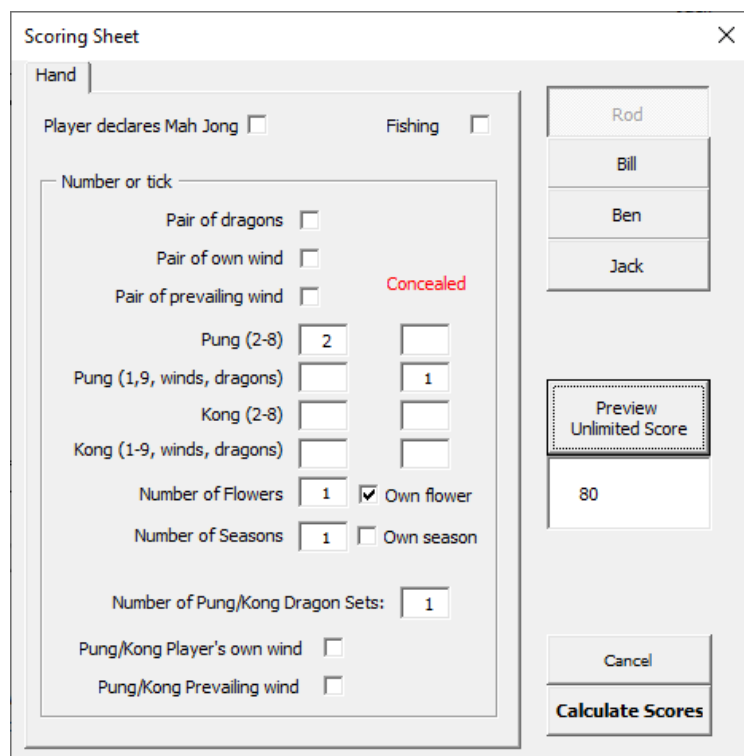
3.8   Scoring a Game

Now that the basic functionality of the scoring program has been described, let's score the following game assuming it is the first round.
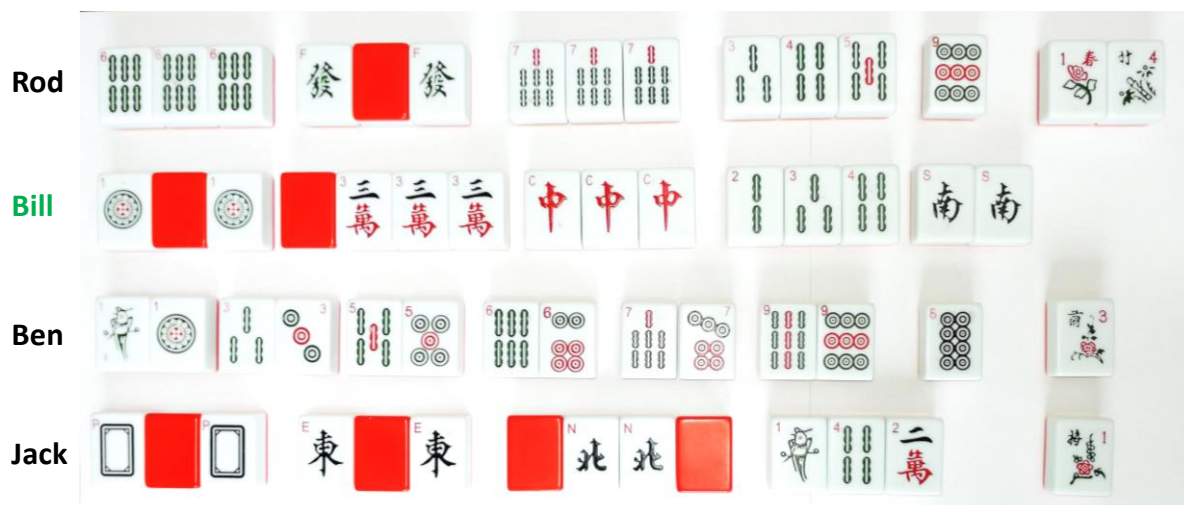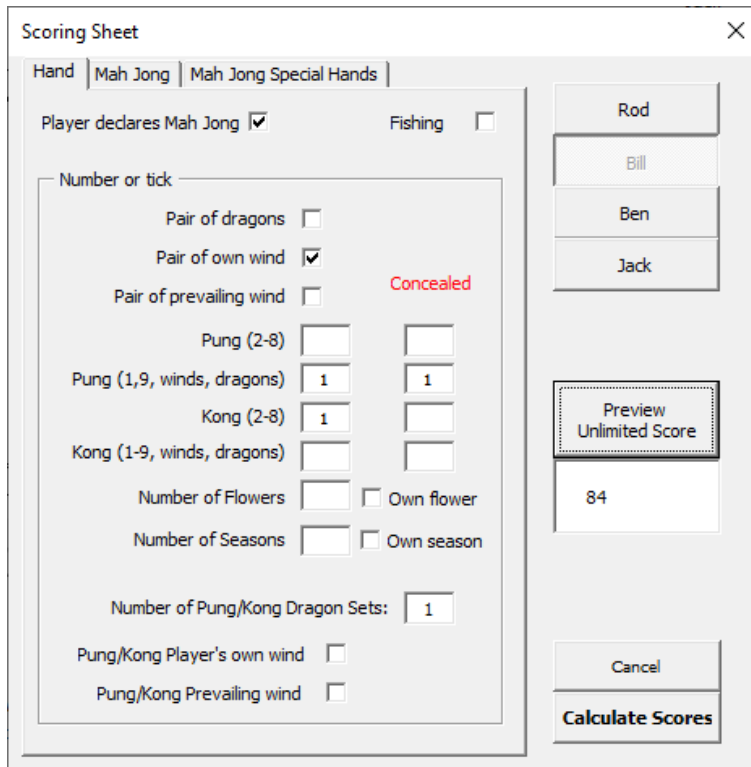
In this example, Bill has gone Mah-Jong. The score menu for each player is now shown.

Rod has a pung of 6 bamboos (minor tile), a concealed pung of green dragons, a pung of seven bamboos (minor tile), one non scoring chow of bamboos and a single 9 of circles tile. He also has his own flower and a single season. Entering Rod's score into the Mah-jong scoring menu looks like this:

Bill has Mah-Jong, a concealed pung of one circles (major tile), an exposed kong of 3 characters (minor tile), a pung of red dragons, a single non-scoring chow of bamboos and a

pair of south winds which is his own wind. Entering Bill's score into the Mah-jong scoring menu looks like:
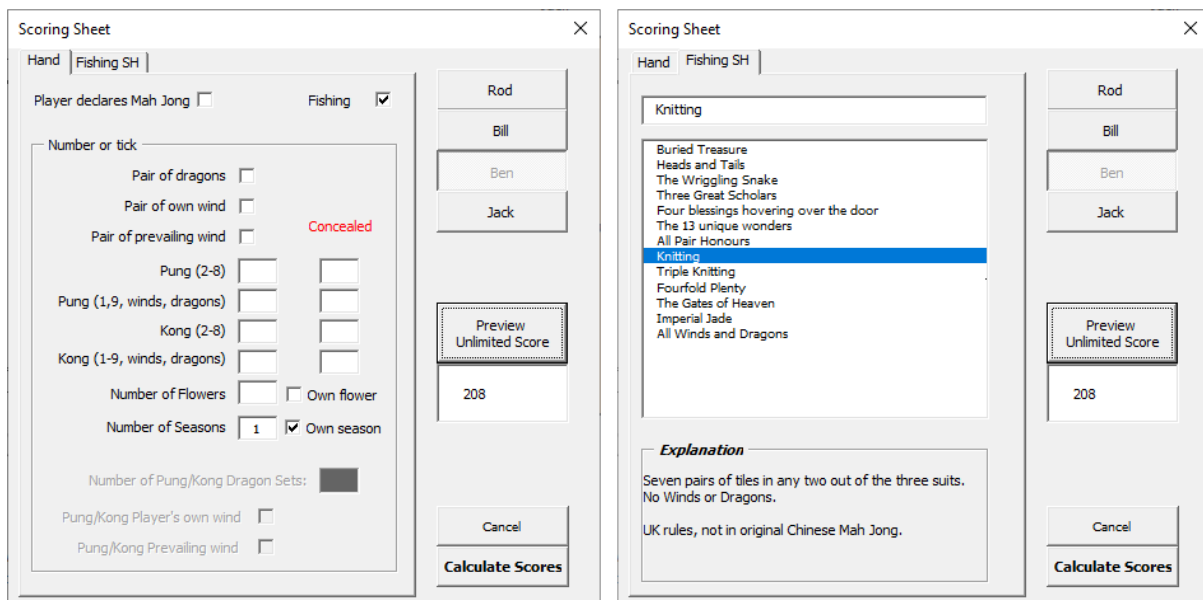
Meanwhile Ben was one away from the special hand of knitting and so his score is entered like this:

Note without his own season he would have scored 200 points. However, his season is worth four points which is then doubled because it is his own season giving him an extra 8 points on top of his 200 points for being one tile away from the special hand of knitting.

Finally, Jack has a concealed pung of white dragons, a concealed pung of East Winds, a concealed kong of North winds and 3 non scoring tiles: 1 bamboo, 4 bamboo and 2

characters. Note that the East wind is the prevailing wind and the North wind is his own wind so both the pung/kong of Player's own wind and the pung/kong Prevailing wind option need to also be ticked. Finally, he has one season tile. Entering Jack's score into the Mah-jong scoring menu looks like:

We now push "Calculate Scores" the following points are entered into the tile score table:
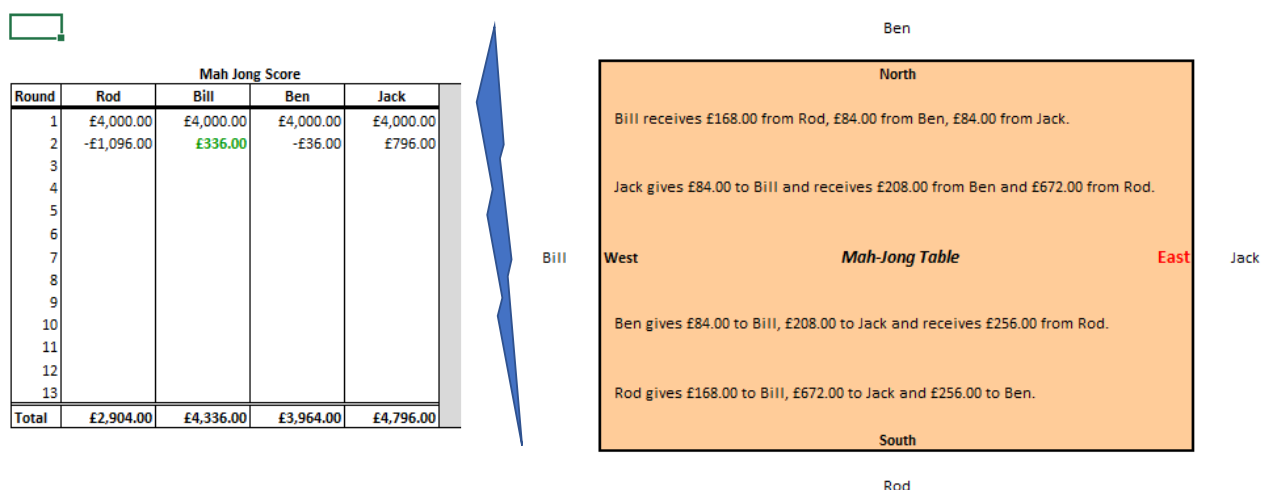
Figure 18: An example tile score from a round of Mah-Jong (see main text for further details)

It is worth noting, that although Bill went Mah-Jong Ben and Jack got much higher tile scores which is completely possible in Mah-Jong. The final phase of the scoring is to tally up; where each player gives or receives points/money to the other players based on their tile scores and whether they went Mah-Jong.

3.9   Tallying up

Figure 19 shows the tally up part of the worksheet. The raw tile score is shown in Figure 18 above but is excluded from this figure so that the table image is not too small to read.

Mah Jong Score

Round	Rod	Bill	Ben	Jack
1	£4,000.00	£4,000.00	£4,000.00	£4,000.00
2	-£1,096.00	£336.00	-£36.00	£796.00
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
Total	£2,904.00	£4,336.00	£3,964.00	£4,796.00

Ben

North

Bill receives £168.00 from Rod, £84.00 from Ben, £84.00 from Jack.

Jack gives £84.00 to Bill and receives £208.00 from Ben and £672.00 from Rod.

Bill   **West**   *Mah-Jong Table*   **East**   Jack

Ben gives £84.00 to Bill, £208.00 to Jack and receives £256.00 from Rod.

Rod gives £168.00 to Bill, £672.00 to Jack and £256.00 to Ben.

South

Rod

Figure 19: Tallying up point/money payments based on the tile score of Figure 18. The Mah-jong scoring program helpfully writes on the Mah-jong table what each player must pay receive for the round just completed with the overall totals then entered into the Mah-Jong score table to the left of the Mah-Jong scoring table.

The first thing to note is that the person who went Mah-Jong score is coloured green in order to help keep track of who won that particular round.

In our example we are using money with a 1 to 1 money to score point ratio (see Figure 1) so rather than the tallies being shown as points they are shown in equivalent monetary values. The tally up process proceeds as follows. The person who scored Mah-Jong receives their Mah-Jong point score (in our example in pounds) from all the other players with the East wind player paying double. Bill had a Mah-Jong point score of 84 so he receives 84 points from Ben and Jack and 168 points from Rod because Rod is East wind so must pay or receive double the amount owed or due. This means, in total, Bill receives 4 times his Mah-Jong score from the 3 other players.

Incidentally, if Bill had been East wind, he would receive double his Mah-Jong score from the other 3 players which means in total he would receive 6 times his Mah-jong score in a 4 player game: $3 \ (number \ of \ other \ players) \times Mahjong \ score \times 2 \ (East \ wind \ bonus)$.

Of the three remaining players who failed to score Mah-Jong, after they have paid what is owed to the Mah-jong player, they then pay out the difference in their score to the losing player's score(s) which are higher than their score. Likewise, they also receive the difference in their score and the losing player's score(s) which are lower than their score.

So in our example, after Jack has paid out £84 to Bill, he receives from Ben £208 (Jack's score – Ben's Score = $416 - 208 = 208$) and £672 from Rod because Rod was East wind in that round and so must pay double (Jack's score – Rod's Score which is $416 - 80 = 336 \times 2\ (EW) = 672$).

After Ben has paid Bill and Jack his £84 and £208 respectively, he receives from Rod £256 which again is twice the difference between Ben and Rod's score: $(208 - 80) \times 2 = 256$.

Finally, Rod, with the lowest score of all, must pay out the differences in his score to the other players but because he was unlucky enough to come last as East wind, all the amounts he pays are doubled. Therefore, Rod pays £168 to Bill, £672 to Jack and £256 to Ben.

In order to aid the transfer of tally sticks, monopoly money or real money (yikes!) the virtual Mah-jong table on the worksheet instructs each player in order from highest to lowest what they must pay or receive from the other players. This information is updated as each round is scored.

Finally, the left table records the running score change in each round for each player and keeps a grand total of all the scores. In our example Bill receives 4 x his Mah-jong score in pounds, Jack received £796.00 (consisting of $£672 + £208 - £84 = £796$); Ben pays out £36 (consisting of $£256 - (£208 + £84) = -£36$); and Rod pays out a whopping total of £1,096 (consisting of $-(£168 + £672 + £256)$). Although Rod's total looks awful, if in setting up the game with real money the players had requested a point to money ratio of 1,000 to 1 then the tally table and Mah-Jong virtual table would look much more reasonable with Rod only paying out £1.10 for the round.

3.10 Scoring a round where no player went Mah-Jong

As discussed above, if you are sticking to the BMJA rules then once the last wall tile is drawn, if no player achieves Mah-Jong then the game is declared void and no points are recorded or tally sticks/money traded. However, if you have been in this situation, you will know how frustrating this feels so this Mah-Jong workbook does allow you to score the round even if all the players fail to make Mah-Jong. After you enter the four players' tile sets the and push "Calculate Scores" the message of Figure 17 appears.

If you click the "Yes" button the program will calculate the tile score as normal. The tally scoring then proceeds as follows. The players scores are ranked from highest to lowest. The player with the highest score receives from each of the other players, the difference in their

score and the other player's score. The player who comes second pays the player who came first the tile score difference between them while receiving from the players who came third and fourth the tile score difference between the second and third and the second and forth player's scores respectively.

The player who comes third pays the player who came first and the player who came second the tile score difference between their score and that individual player who is receiving points/money from them while receiving from the fourth player the tile score difference between their score and the fourth player's score. Finally, the fourth player pays the first, second and third players the difference between their tile score and that of the first, second and third players respectively. An example is shown in Figure 20.

Figure 20: An example of scoring a game where no player went Mah-Jong. Because there is no Mah-Jong for that round, no score is coloured green.

3.11 Three Player games

If you select a three-player game, the North wind is not used and players simply rotate between the East, South and West winds. Also according to BMJA rules, in three player games no chows are allowed in Mah-Jong so while this rule is not enforced by the program, the doubling bonus for a No chow Mah-jong is not applied unless you change this setting as shown in section 4.4, page 30.

Tallying works exactly the same way except there is one less player. So the player who went Mah-Jong receives their Mah-Jong point score from the other two losing players. If they are East wind, then they receive double from each player meaning that their total point score for that round is four times their Mah-jong score ($Mahjongscore \times 2(losing\ players) \times 2(Winning\ player\ East\ Wind\ doubling\ bonus)$). Alternatively, if a losing player is East wind then the Mah-Jong player receive three times their Mah-Jong score (once from the losing player who is not East wind and twice from the player who is East wind).
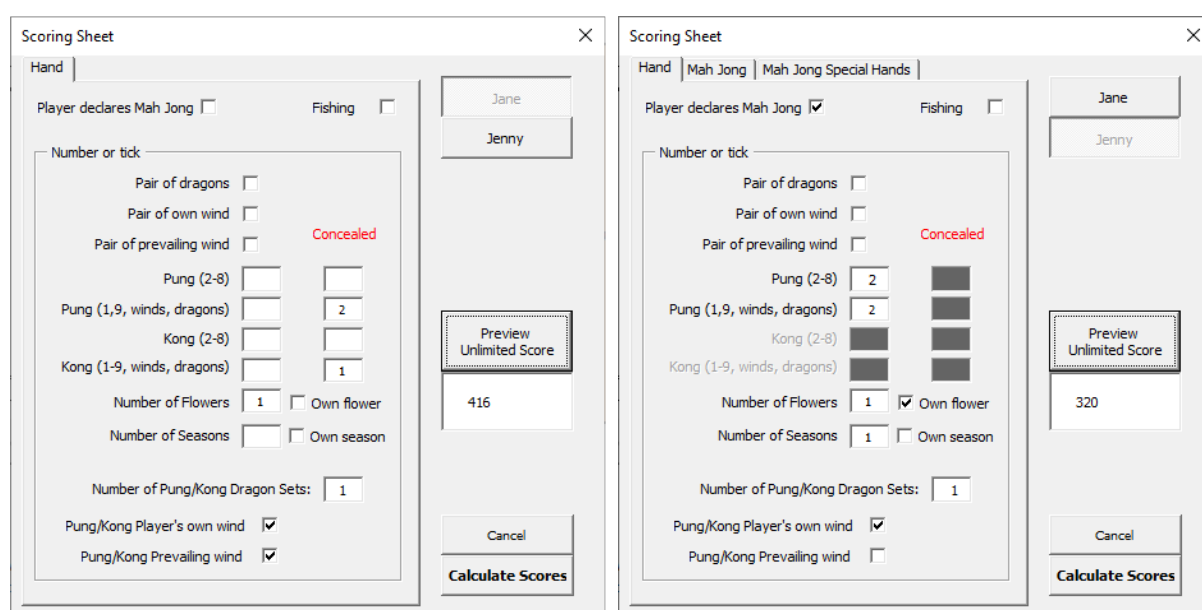
The two remaining players will of course make a single transaction with the player that has the smallest non-Mah-Jong score paying the other non-Mah-Jong scoring player the difference in their score values.

3.12 Two Player games

In two player games the East wind doubling does not apply. The two players therefore rotate freely around the table occupying two of the four winds as now it does not matter if the East wind position is empty after the first round (where East Wind starts) because the player who goes first per round simply alternates between the two players. In two player games, the player who gets Mah-jong is paid that point value by the other player and if the player who got Mah-Jong has the higher score, then no further transactions take place.

However, if the player who gets Mah-jong has a lower point score than the other player, then after the losing player pays the Mah-jong scoring player their Mah-jong point value, the Mah-jong player must pay back the difference between their Mah-jong score and the higher losing player's tile score.

For example, let's say Jenny and Jane are playing a two player Mah-Jong game and Jenny Mah-Jong's with 2 minor pungs and 2 major pungs: one being a pung of dragons and one being her own wind. Let's also say she has one flower which is her own flower and one season (not her own). Jane on the other hand, gets the same hand as Jack above. The scoring of both hands is shown below:

When you push the calculate scores button the tile score and Mah-jong score value entered into the score table will be the same as those shown in Figure 21. Note that although Jenny got 320 points, she only receives 224 points from Jane because after receiving the 320 points from Jane, Jenny must pay back the difference between her score and Jane's score because Jane's score is higher. This difference is $416 - 320 = 96$. So Jenny pays 96 back to Jane meaning her payment of 320 is reduced by 96 to 224 ($320 - 96 = 224$). This is the amount that appears in the Mah-Jong score table (Figure 21).

Mah Jong Score						Tiles Score			
Round	Jane	Jenny				Jane	Jenny		
1	-224	224				416	320		
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
Total	-224	224	0	0		416	320	0	0

East does not pay double in 2 handed Mah Jong

Define Game   Remove last score   Score Game

*Figure 21: Two player Mah-Jong where the non-mah-jong score is higher than the Maj-jong score. This means that the losing player does not pay the full point value of the winning player's Mah-jong but rather pays the winning player's Mah-jong score reduced by the amount the **losing player exceeds** this winning score. See main text for details. Note if the losing score was exactly twice the winning score, then no money or points would change hands as the amount paid back to the losing player exactly equals the amount they had to pay the winning player. If the losing player's score is greater than twice the winning score, then the losing player will actually receive points/money from the player that went Mah-jong in this two player version of the game.*

4   Changing the Scoring Program's default options

As discussed previously, there is wide variation in how Mah-jong is scored. The worksheet tab "Scoring Rules" in the Mah-jong workbook contains a worksheet with all the numbers that are used by the program to calculate the score. The numbers that are commonly altered in various house-rule Mah-Jong scoring schemes can also be altered on this page to change the way the program scores each hand. The main values that can be changed are the following.

4.1   Round Limit

This is probably the most commonly altered scoring rule in Mah-Jong. The normal round limit as specified by BMJA is 1,000 however on this page you can increase or decrease this limit. If very experienced players are playing with beginners, it is wise to decrease the round limit from 1,000 to say 300 to properly handicap the better players by limiting their single round scores.

Alternatively, if you are finding that you are regularly getting Mah-jong scores which exceed 1,000 points, you might want to increase the score limit so these larger scores can be entered into your score table.

4.2   Score for Going Mah-Jong

In British Mah-Jong this score is 20 points however there are several versions where the Mah-Jong score is only 10 points. You can change the value the program assigns Mah-jong here to any value you like. If you are someone who likes to award a doubling for a Mah-jong with no scoring hands (ie a Mah-jong consisting of pure chows) then you can double the

Mah-jong score here for the round where someone has a Mah-jong with all chows as this doubling option is not part of the BMJA rules and so is not supported by this program.

Mah Jong Scoring

	Exposed	Concealed
Pair Dragons	2	2
Pair Prevailing Wind	2	2
Pair of own wind	2	2
Pung (2-8)	2	4
Pung (1,9)	4	8
Kong (2-8)	8	16
Kong (1,9)	16	32

Score Limit	1000

Multiply by

Pung or Kong with players own wind	2
Pung or Kong with prevailing wind	2
Pung or Kong of Dragons	2
Own Flower	2
Own Season	2
Complete Flower Set	2
Complete Season Set	2

Mah Jong	20
Mah Jong with wall tile	2

Multiply by

Mah Jong from Kong Box	2
Mah Jong with last tile from wall	2
Going Mah Jong with last Discard	2
Mah Jong by robbing the Kong	2
Mah Jong from Original Call	2
No Chows	2
All one suit with dragons or winds	2
All major tiles with dragons or winds	2
Pungs/Kongs One suite no Dragons or Wind	8
All Concealed Hand	2

Restore Default Special Hands Scores | Move Special hands scores to new limit

Traditional Chinese Special / Extra British Special Hands

Special Hands	Mah Jong	Fishing	
Buried Treasure	1000	400	Concealed Pungs in one suit with Winds/Dragons as a pair.
Heads and Tails	1000	400	Pungs/Kongs of Ones and Nines.
The Wriggling Snake	1000	400	A pair of Ones and a run from Two to Nine in the same suit, with each of the winds.
Three Great Scholars	1000	400	Pungs/Kongs of all three Dragons, another Pung/Kong and a pair.
Four blessings hovering over the door	1000	400	Pungs/Kongs of each of the four Winds with any pair.
The 13 unique wonders	1000	400	One of each Dragon, one of each Wind, one of each One and one of each Nine. Any one of these tiles must be paired.
Heaven's blessing	1000	0	Mah Jong immediately made by East with the original fourteen tiles dealt to that player (Fishing not applicable).
Earth's blessing	1000	0	Mah Jong immediately made by West, North or South using the first discard made by East (Fishing not applicable).
Gathering the plumb blossom from the roof	1000	0	The Plum Blossom is the Five of Circles. This is made by a player who draws a loose tile (the roof) as a replacement for a Kong, a Flower or a Season and that tile is the Plum Blossom which allows the player to go Mah Jong. (Fishing not applicable)
Plucking the moon from the bottom of the sea	1000	0	The Moon is the One of Circles. This is made by a player who upon drawing the last tile from the wall finds that it is the Moon which allows the player to go Mah Jong. (Fishing not applicable)
All Pair Honours	500	200	Seven pairs of Ones/Nines/Winds/Dragons
Knitting	500	200	Seven pairs of tiles in any two out of the three suits. No Winds or Dragons.
Triple Knitting	500	200	Four sets of the three tiles in the different suits and a pair. No Winds or Dragons.
Fourfold Plenty	1000	400	Four Kongs and a pair
The Gates of Heaven	1000	400	A concealed Pung of Ones, a concealed Pung of Nines, a run from Two to Eight with one pair in the same suit.
Imperial Jade	1000	400	Pungs/Kongs of the green tiles and a pair. Green tiles are Green Dragons and Twos, Threes, Fours, Sixes and Eights of Bamboos.
TwoFold Fortune	1000	0	Made by a player who declares a Kong, draws a tile which allows the declaration of another Kong and then draws a tile which allows the declaration of Mah Jong (Fishing not applicable).
All Winds and Dragons	1000	400	Pungs/Kongs of Winds/Dragons. No Suit tiles.

4.3 Special hands scores

It is possible to change the score of every single special hand individually. However, if you read most instructions booklets that come with standard Mah-jong sets, you will find that the special hands normally simply score the round limit. Thus, if you decide to increase/decrease the round limit, you might want to also increase/decrease the special hands so they match the new round limit. You can do that in one step by pushing the button "Change Special Scores to New Limit" button. Note this operation maintains the relationship between the maximum scoring special hands, the fishing score for these same special hands, and the half maximum score regime for the British special hands "Knitting", "Triple knitting" and "All pair honours".

Alternatively, you might want to leave the score limit at 1,000 even if you increase the score limit. That way it would be possible to get a higher score using the standard Mah-jong scoring scheme than claiming the special hand score. A good example of this would be the large score of a Mah-jong hand with 4 season, 4 flowers, 3 kongs of dragons and one kong of winds (Figure 9). This hand also meets the criteria for the special hand "All Winds and Dragons" as well as being able to be scored using the standard Mah-jong score values and applying the 13 doubling bonuses as discussed in section 3.3, page 10. If you have changed the scoring limit to above 1,000, and you have kept the special hand values at their original values, then it is does become important to use the "Preview Unlimited Score" button because you might find the unlimited score is higher than the special score.

If you're like me, you might also want to alter individual Special hand scores to create your own house rules. For example, it is obvious that the special hand "The Three Scholars" is statistically more likely than the bonus hand "4 blessings hovering over the door" because the latter hand requires a pung of all 4 winds whereas the former hand only specifies the three dragons. Yet both these hands score 1,000 points. In my own house rules, I have altered "The Three Scholars" special hand score to 750 points to reflect that it is harder to get than the special hand "Knitting" but easier than "Four Blessings Hovering over the Door".

The following setting are found on the "Authors Notes" worksheet which is the first one inside the Mah-Jong program workbook.

Mah Jong: A Game that is Difficult to Score!

I have written this Excel workbook to help people who play Mah Jong score it properly as the proper scoring of this game is somewhat difficult. I hope this program is useful to you as you play this most wonderful game. Although you have downloaded it for free, if you do find it valuable then please consider donating to my Paetron page which is:

This program allows the user to score using the traditional Chinese game rules or the extended British rule version. Note it supports neither Japanese nor USA Mah Jong variants.

I have also spent some time on the scoring menu to make sure it is not possible to enter nonsensical data and I have done this not by providing lots of error messages but rather implicitly, by designing the entry form to restrict the entry of incorrect data. For example, by definition, it is not possible to score more than 4 x (kongs/pungs) because your tile total can only be 14 - 18. Therefore once 4 is reached in the scoring menu all empty fields are greyed out to stop further entry. Likewise, if you have entered say 2 (pungs/kongs) then you cannot type a 3 into another field as this would exceed the total possible number of scoring tiles.

Other examples, include the many scoring options some of which exclude others. For example, a player who did not go Mah Jong might have a pair of their own winds, and a pair of dragons. However, once they go mah jong, the must lose one of these pairs as a normal mah jong only contains one pair unless it is the British special hand of "knitting".

The two options below allow the user to deselect the British scoring extensions (if you deselect this option then only the Chinese special hands are available) and to double Mah Jong scores that contain no chows for three or two players. This bonus is not normally applied in three or two player games because the standard Mah-Jong rule is that chows are not allowed in games with less than 4 players.

☑ No doubling Mah-Jong score for no chows with fewer than 4 players   ☑ Use British scoring extensions and special hands

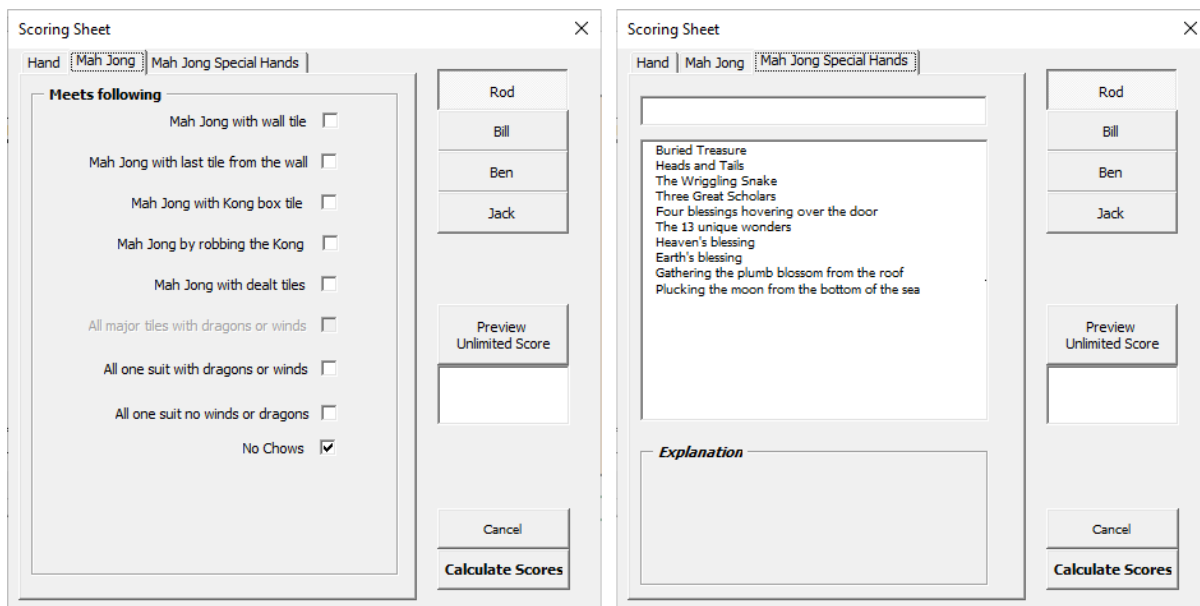☐ Always rotate the winds   ☐ Change Prevailing wind each round

4.4   No Doubling no chow Mah-Jongs for fewer than 4 player games.
The British Mah-Jong rules place a strict limit of only 1 chow in a Mah-Jong for 4 player games and no chows in games of three players or less. Obviously, if you are not allowed to Mah-Jong with any chows then the No chow doubling bonus should not be applied. Therefore if you are playing three or two player games then even though the no chow option will be ticked when you record a Mah-jong with four pungs/kongs, the doubling bonus will not be applied unless you untick this setting in the "Author's Notes" worksheet.

4.5   Use British Scoring extensions and Special Hands
If you untick this box then only the traditional Chinese special hands are shown and the UK doubling bonus for going Mah-Jong with the last discard tile or the hand being all concealed are also removed from the menu (Figure 22).

Figure 22: The Scoring menu with the British extensions switched off. On the Mah-Jong page there are less bonus doubling options (compare Figure 22, left panel with Figure 10 and Figure 22, right panel with Figure 13.

4.6   Always rotate winds

On the Mah-Jong score sheet, the virtual Mah-Jong table shows which wind each player was for the particular round that is being scored. When you score the round, the players' names rotate around the winds with the East wind's player's name moving to the South wind, the South wind player's name moving to the West wind, the West wind player's name moving to the North wind and the North wind player's name moving to the East wind (assuming a 4 player game). However, the BMJA rules state that players do not rotate if East wind wins the round. You might think this is an unfair reward as East Wind winning the round means they have already received twice as many points from each player than their raw Mah-Jong tile score so why give them another opportunity to get double payments from their competitors?

Yet retaining East wind cuts both ways because if East Wind *loses,* then they must pay each player twice the amount owed. In some ways, keeping the player, who won as East wind, East wind for the next round, gives all the other players a chance of getting even by getting twice the payment out of the East wind player if they lose the next round. So moving the East wind player to South wind if they win the round is debatable. The default setting for the Mah-Jong scoring program is to adopt the BMJA convention and not rotate the players if the East wind player wins the round. However, if you want the players to always rotate around even if East wind wins the round then simply tick this option and the program will always rotate the players independent of whether East wind wins or loses the round.

4.7   Change prevailing wind each round

Many standard instruction books that come with Mah-Jong sets will state that the prevailing wind changes each round and the prevailing wind is determined by spinning a cylinder which has printed on it the four winds. However, the strict BMJA rules state that the

prevailing wind at the start of the match is East and remains East until all players have been East wind. When the first player becomes East wind again (round 5), the prevailing wind then changes to south. In round 9 the prevailing wind becomes West and in round 13 it finally becomes North. Given most people play at most only a few rounds per session, most players choose to randomly assign the prevailing wind after each session.

If you want the Mah-jong scoring program to do this for you, switch on this option. When you first do this a small statement above the scoring table informs the user that the prevailing wind is East (East wind is always the first prevailing wind when starting a Mah-jong match).

After scoring the round, the prevailing wind will be reassigned at random. Obviously, if your Mah-jong set already supplies a four-wind spinner, you may not want to use this scoring program option even if you decide you will change the prevailing wind per session (entirely up to you). Ultimately it makes no difference to the function of the scoring program because it is up to the user to indicate if the player has a pair/pung/kong of the prevailing wind.

5   Conclusion

I hope this program is helpful to you as you play and score this fascinating Chinese tile game. If you do find this program useful, please consider reviewing it here and promoting my website www.bensonium.com to your friends and family. You might also like to check out my other programs which are also available on the website here.