MA1008 Mini Project, AY 2019/2020 Sem 2
FAQ

Q1: On the mini project, for the wheel of fortune graphic, does display screen have to be qt based or html based?

A: No. No HTML. I don't know what qt is.

Q2: Furthermore, is there a need to create a GUI?
A: Your graphical display is your GUI. But you don't have to create an interactive GUI. The display is purely for output, simulating the turning of the wheel and displaying the result of each turn. All inputs (such as calling out a letter) can be made through text interface in the Python shell. But if you can create an interactive GUI, by all means.

Q3: Do we have to allow multiplayers where by multiple people can play the game?

Yes, multiple players – three. But you should first make a game with just one player, to make sure that things work for one player, before moving on to three.

Q4. Can we use Object-Oriented Programming? Can we have multiple files?

A: Yes, you can use OOP, if by that you mean creating your own classes and modules, which have not been covered in the course. But that's not essential if you don't feel confident in using that. (By the way, some of what you have learned in this course uses principles of OOP, such as the methods associated with specific data types. But we have not mentioned OOP in the course, to avoid overloading you with advanced concepts and terms.)

Yes, you can have multiple files, and that's desirable if you create multiple classes.

Q5. Can we use other graphics libraries like matplotlib or Pygame?

A: No. Graphics should be done using Turtle only. This is to prevent you spending a lot of time learning different libraries, and also ensure that everyone is working using the same tools. No one has advantage of a better tool (if it's better).

Basically, you should be using only the libraries that are directly available upon downloading Python. You should not be downloading extra libraries from elsewhere.

Q6. How do we graphically rotate the wheel which requires the rotation of the text as well?

A: It is not easy to rotate the wheel using Turtle, especially when you have to rotate the text as well. That will probably cost you too much time and effort. You can avoid doing that and yet produce the effect of the wheel rotation. In rotating the wheel, you need to have a marker which marks the sector that the wheel ends at. This marker can be a little circle or square or cross, something graphical for marking the stopping position of the wheel. The marker and the wheel have a relative motion, i.e., the wheel rotates and the marker is fixed. Now instead of rotating the wheel, you can rotate the marker instead, which is a lot easier to do graphically.

Q7. How do I determine how far the wheel should rotate upon a spin?

A: The distance the wheel travels upon a spin can be counted by the number of sectors passing the position of the marker (or when you rotate the marker, then the number of sectors the marker travels through). This distance needs to be non-specific, i.e. different spins can produce different distances. This distance needs to be within a certain range, say between 20 and 30 sectors; the actual number is to be determined randomly. If you want to add variety to the game, you can even have players of different physical strengths, with the stronger players spinning through a larger number of sectors.

Q8. I have noticed that in the instructions handout for the Wheel Of Fortune project, there is a requirement of a time limit of 10 secs for the player to make their decision. However, the time limit is only mentioned at the first spin for each player. Also, it is also only mentioned where the player upon guessing a correct letter, has 10 seconds to decide if he wants to complete the phrase.

1. I am wondering if the player does not want to complete the phrase, is there still the 10 seconds limit?
2. As there are quite a number of decision making (choosing whether to buy vowel, spin again or guess the phrase) involved, I want to check if I am supposed to limit all these decision making to 10 secs?

Once a decision has been made, is it true that the player only has10 secs to enter his 'guess' (can be one letter or the whole phrase)?

A: 1. If the player doesn't want to complete the phrase, then he/she must choose one of the other available actions.
2. Yes, there's always a 10 second limit to the player's action: spin, solve or call a letter. In the game on TV, they have only 3 seconds.

Q9. Can I use the Tkinter library?
A: No. Please stick to using Turtle.

Q10.1 I have questions regarding the question set for the intro to computational thinking. I would like to double check some of the rules to the wheel of fortune game.

Firstly on the first page of the notes the rules state in 1.a.ii third pointer that "The vowel doesn't exist or has already appeared. The player loses the turn and no money is deducted." However in the flow chart that is not the case. The flow chart shows that money is immediately deducted and is not returned if the player makes a mistake.
Ans: The flow chart is correct. $250 is deducted regardless of whether the player calls the right vowel. The handout text has been modified accordingly. Thanks.

Q10.2 Secondly the rules on the first page only show what happens if you buy a consonant but not what happens if you buy a vowel. Whereas the flowchart at the back gives the instructions for both choosing a vowel and a consonant.
Ans: Again, the flow chart is right. The play moves to the same place where the player buys a vowel after calling a consonant. The handout text has been modified accordingly. Thanks.

Q10.3 Thirdly in the rules stated in the front “upon successfully filling in a letter, the player is offered a chance to complete the phrase within 10 secs.” However in the flow chart at the back it shows that even if a player does gets the letter wrong the player is still allowed to buy a vowel or solve the puzzle.
Ans: The flow chart is correct. Whenever a player gets a call wrong or lands on “Bankrupt” or “Lose a turn”, the turn is passed on to the next player before the next action. See that there is always “Next player” in the box after such events. The only exception is when a player lands on “Free play”, which doesn’t require the losing of turn even if the player calls the wrong letter.

Q11. I have a doubt regarding spinning the wheel. Should we make the wheel or use the picture given in the project handout? If we use the picture, then how will it interact with turtle?
Ans: You can use the picture given in the handout as your wheel, or make your own wheel. The choice is yours. If you use the given wheel, then you can keep it static, essentially as the background to your display, but then rotate the marker that shows where a spin lands on. Basically, you need to simulate the effect of spinning the wheel, and may not necessarily spin the wheel. This point of “simulating the effect” also means that you can draw your own wheel which may or may not look like a wheel at all, so long as you can produce the effect of a spin and the marker landing on a particular sector.