Programming Fundamentals

Tutorial 6

Note: You are not allowed to copy-paste code snippets. You need to have a basic understanding of following concepts at the end of the Tutorial

- Functions and parameters
- Global and local scope
- Return from a function

1. Use Pycharm integrated development environment (IDE) to write and run the following programs. If it not installed, you can use Python IDLE.

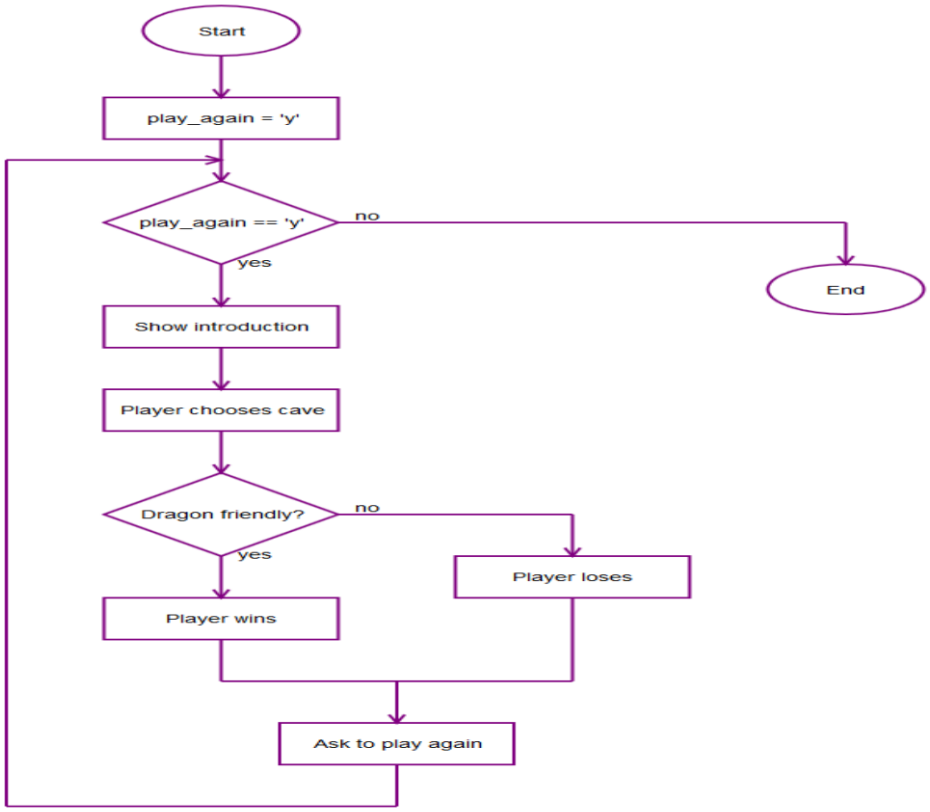
2. You are asked to develop a game called Dragon Kingdom. First, read the requirement carefully and try to understand.

   What is Dragon Kingdom game?
   The player is in the Kingdom of Dragons. The dragons live in caves with their large piles of collected treasure. Some dragons are friendly and share their treasure. Other dragons are hungry and eat anyone who enters their cave. The player approaches two caves, one with a friendly dragon and the other with a hungry dragon, but doesn't know which dragon is in which cave and must choose between the two caves. View of game when it is run. The player's input is in bold

```
You are in the Kingdom of Dragons. In front of you, you see two
caves. In one cave, the dragon is friendly and will share his
treasure with you. The other dragon is hungry and will eat you on
sight.

Which cave will you go into? (1 or 2)
1
You approach the cave... A large dragon jumps out in front of
you! He opens his jaws and...
Gobbles you down!

Do you want to play again? (y or n)
n
```



1.1 Your program will need to import two modules, so place these at the top of the program. Random provides *randint()* and time provides the sleep() function that we will use.

```
import random
import time
```

1.2 **Show Introduction.** Define a function called *display_intro* that has no parameters and prints out the following when called.

```
You are in the Kingdom of Dragons. In front of you, you see two
caves. In one cave, the dragon is friendly and will share his
treasure with you. The other dragon is hungry and will eat you on
sight.
```

1.3 **Player Choses Cave**. Define a function called *choose_cave* that has no parameters and will ask the player if they want to enter cave 1 or 2 and returns a valid response

1.4 **Check for Friendly Dragon.** Create a function called *check_cave* that has a parameter called *chosen_cave, randomly select if there is a dragon or not. And print the output accordingly.*

1.5 **Calling the Functions.** The main part of your program should now look like this.

```
display_intro()
cave_number = choose_cave()
check_cave(cave_number)
```

1.6 **Ask to Play Again.** Add the feature to check if the user wants to play again

1.7 **FINAL CHALLENGE -** Extend the above program. Create another program *dragon_multi.py* that has 4 caves (instead of 2) and include appropriate messages for the player selecting cave 1, 2, 3 or 4.