ZhibinWu_Assignment_02

September 7, 2025

Zhibin Wu

2025/09/07

Question 1

```
[1]: numberOne = 100
     numberTwo = 29
     sumAndMultiply = ((numberOne + numberTwo) * 3)
     totalResult = (pow(sumAndMultiply, 2))
     print("The result of the calculation was:")

     space = 30
     """
     Teacher mentioned that we should
     make the result exactly like the one in the question file.
     So I use center().
     """
     print(str(totalResult).center(space))
```

```
The result of the calculation was:
            149769
```

Question 2

```
[2]: yourName = input("Name:")
     birthYear = int(input("Year of birth:"))
     yourAge = int(input("Age:"))

     exponent = (pow(yourAge, 2))
     print("Password: " + str(birthYear)[2:4] + yourName[0:3] + str(exponent))
```

```
Name: John
Year of birth: 1995
Age: 26

Password: 95Joh676
```

Question 3

```
[3]: firstNumber = int(input("First number:"))
     secondNumber = int(input("Second number:"))

     if firstNumber % 2 == 0 and secondNumber % 2 == 0:
         print("Both numbers are even.")
     elif firstNumber % 2 == 0 or secondNumber % 2 == 0:
         print("One of the numbers is even")
     else:
         print("Both numbers are odd")
```

First number: 5

Second number: 6

One of the numbers is even

Question 4

```
[4]: numberFromUser = int(input("Give an integer:"))
     sumNumber = 0
     for initial in range(numberFromUser):
         sumNumber += initial
     print("The sum was: " + str(sumNumber))
```

Give an integer: 5

The sum was: 10

Question 5

```
[5]: import random
     randomNumber = random.randint(1, 10)
     guessNumber = 0
     timeOfTries = 0

     while guessNumber != randomNumber:
         guessNumber = int(input("Player: "))
         timeOfTries += 1
         if guessNumber < randomNumber:
             print("Try a greater number.")
         elif guessNumber > randomNumber:
             print("Try a smaller number.")
         else:
             print("That's right! Number of tries: " + str(timeOfTries))
```

Player: 6

Try a greater number.

Player: 8

Try a greater number.

2

```
Player:  9

That's right! Number of tries: 3
```

Bonus Question

```python
import random

# The one-line code below sets up a random number for the first user.
randomNumber_firstPerson = random.randint(1, 10)

# Below are the steps showing how the first person guesses the number.
guessNumber_firstPerson = 0
timeOfTries_firstPerson = 0
while guessNumber_firstPerson != randomNumber_firstPerson:
    guessNumber_firstPerson = int(input("Player1:"))
    timeOfTries_firstPerson += 1
    if guessNumber_firstPerson < randomNumber_firstPerson:
        print("Try a greater number.")
    elif guessNumber_firstPerson > randomNumber_firstPerson:
        print("Try a smaller number.")
    else:
        print("That's right! Number of tries: " + str(timeOfTries_firstPerson))

print() # an empty output to separate results from two users visually in the
 ↪output section.
print() # an empty output to separate results from two users visually in the
 ↪output section.

"""
The line below sets up a random number for the second user,
because I simulate two users at the same time to play the game,
I need the game to be really random.
"""
randomNumber_secondPerson = random.randint(1, 10)

# Below are the steps showing how the second person guesses the number.
guessNumber_secondPerson = 0
timeOfTries_secondPerson = 0
while guessNumber_secondPerson != randomNumber_secondPerson:
    guessNumber_secondPerson = int(input("Player2:"))
    timeOfTries_secondPerson += 1
    if guessNumber_secondPerson < randomNumber_secondPerson:
        print("Try a greater number.")
    elif guessNumber_secondPerson > randomNumber_secondPerson:
        print("Try a smaller number.")
    else:
        print("That's right! Number of tries: " + str(timeOfTries_secondPerson))
```

```
print() # an empty output to separate the number results and the winning result␣
↪visually.
print() # an empty output to separate the number results and the winning result␣
↪visually.

if timeOfTries_firstPerson < timeOfTries_secondPerson:
    print("Winner is Player1")
elif timeOfTries_firstPerson > timeOfTries_secondPerson:
    print("Winner is Player2")
else:
    print("They are equal")
```

Player1: 5

Try a greater number.

Player1: 8

Try a greater number.

Player1: 9

Try a greater number.

Player1: 10

That's right! Number of tries: 4

Player2: 4

That's right! Number of tries: 1

Winner is Player2

```
[7]: # Last time when my Jupyter notebook on Anaconda convert code into html file,␣
     ↪it only shows the last line of results in output section. This time I use␣
     ↪Homebrew and Mactex in my terminal, so it is able to convert file into PDF␣
     ↪with all the lines of results in output section.
```