

Assignment -1
Python Programming

Assignment Date	29 September 2022
Team ID	PNT2022TMID44156
Student Name	Ms.Shafya N
Student Roll Number	724019104021
Maximum Marks	2 Marks

Question-1:

Write a Python program to add two objects if both objects are an integer type.

Solution:

```
def add_numbers(a, b):  
    if not (isinstance(a, int) and isinstance(b, int)):  
        return "Inputs must be integers!"  
    return a + b  
print(add_numbers(10, 20))  
print(add_numbers(10, 20.23))  
print(add_numbers('5', 6))  
print(add_numbers('5', '6'))
```



The screenshot shows a Python code editor interface. The code is as follows:

```
1 def add_numbers(a, b):  
2     if not (isinstance(a, int) and isinstance(b, int)):  
3         return "Inputs must be integers!"  
4     return a + b  
5 print(add_numbers(10, 20))  
6 print(add_numbers(10, 20.23))  
7 print(add_numbers('5', 6))  
8 print(add_numbers('5', '6'))
```

The output on the right side of the editor is:

```
30  
Inputs must be integers!  
Inputs must be integers!  
Inputs must be integers!
```

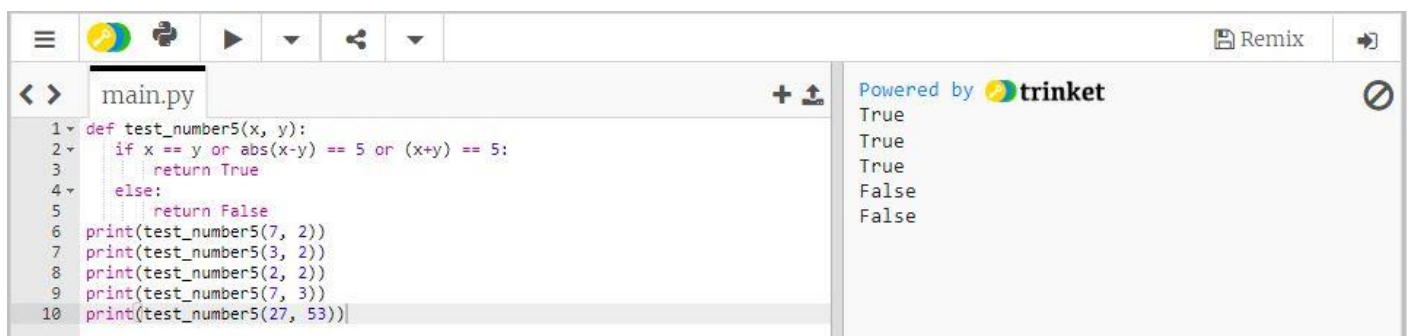
The interface includes a toolbar with icons for file operations, a 'Remix' button, and a 'Powered by trinket' logo.

Question-2:

Write a Python program which will return true if the two given integer values are equal or their sum or difference is 5

Solution:

```
def test_number5(x, y):
    if x == y or abs(x-y) == 5 or (x+y) == 5:
        return True
    else:
        return False
print(test_number5(7, 2))
print(test_number5(3, 2))
print(test_number5(2, 2))
print(test_number5(7, 3))
print(test_number5(27, 53))
```



The screenshot shows a Python IDE interface. On the left, a file named 'main.py' is open, displaying the following code:

```
1 def test_number5(x, y):
2     if x == y or abs(x-y) == 5 or (x+y) == 5:
3         return True
4     else:
5         return False
6 print(test_number5(7, 2))
7 print(test_number5(3, 2))
8 print(test_number5(2, 2))
9 print(test_number5(7, 3))
10 print(test_number5(27, 53))
```

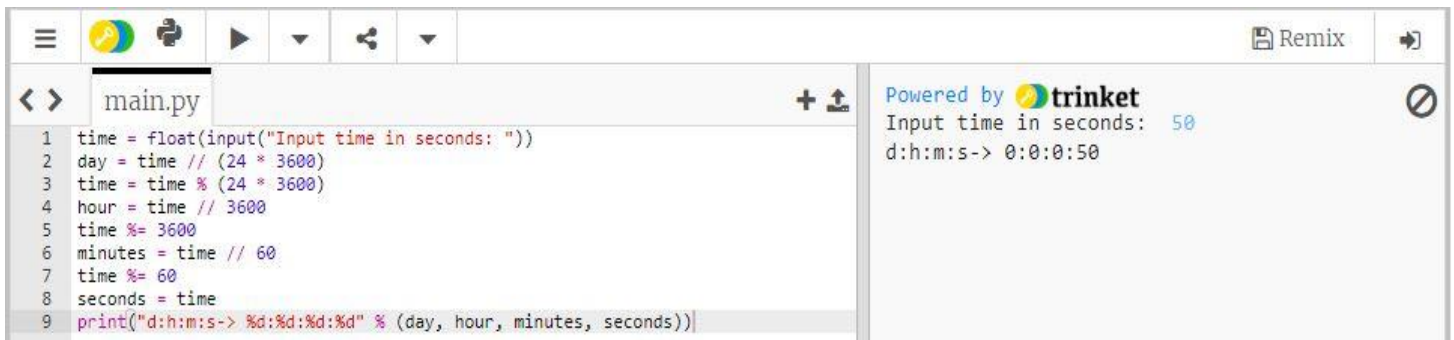
On the right, the output of the program is displayed, showing the results of the function calls: True, True, True, False, and False. The output is powered by trinket.

Question-3:

Write a Python program to convert seconds to day, hour, minutes and seconds.

Solution:

```
time = float(input("Input time in seconds: "))
day = time // (24 * 3600)
time = time % (24 * 3600)
hour = time // 3600
time %= 3600
minutes = time // 60
time %= 60
seconds = time
print("d:h:m:s-> %d:%d:%d:%d" % (day, hour, minutes, seconds))
```



The screenshot shows a Python code editor interface. On the left, a file named 'main.py' is open, displaying the following code:

```
1 time = float(input("Input time in seconds: "))
2 day = time // (24 * 3600)
3 time = time % (24 * 3600)
4 hour = time // 3600
5 time %= 3600
6 minutes = time // 60
7 time %= 60
8 seconds = time
9 print("d:h:m:s-> %d:%d:%d:%d" % (day, hour, minutes, seconds))
```

On the right, the output of the program is shown, indicating it is powered by trinket. The input is '50' seconds, and the output is 'd:h:m:s-> 0:0:0:50'.

Question-4:

Write a Python program to calculate body mass index.

Solution:

```
height = float(input("Input your height in Feet: "))
weight = float(input("Input your weight in Kilogram: "))
print("Your body mass index is: ", round(weight / (height * height),
2))
```



The screenshot shows a Python code editor interface. On the left, a file named 'main.py' is open, displaying the following code:

```
1 height = float(input("Input your height in Feet: "))
2 weight = float(input("Input your weight in Kilogram: "))
3 print("Your body mass index is: ", round(weight / (height * height), 2))
```

On the right, the output of the program is shown, indicating it is powered by trinket. The input is height '6' and weight '70'. The output is 'Your body mass index is: 1.94'.

Question-5:

Write a Python program to hash a word.

Solution:

```
soundex=[0,1,2,3,0,1,2,0,0,2,2,4,5,5,0,1,2,6,2,3,0,1,0,2,0,2]
```

```
word=input("Input the word be hashed: ")
```

```
word=word.upper()
```

```
coded=word[0]
```

```
for a in word[1:len(word)]:
```

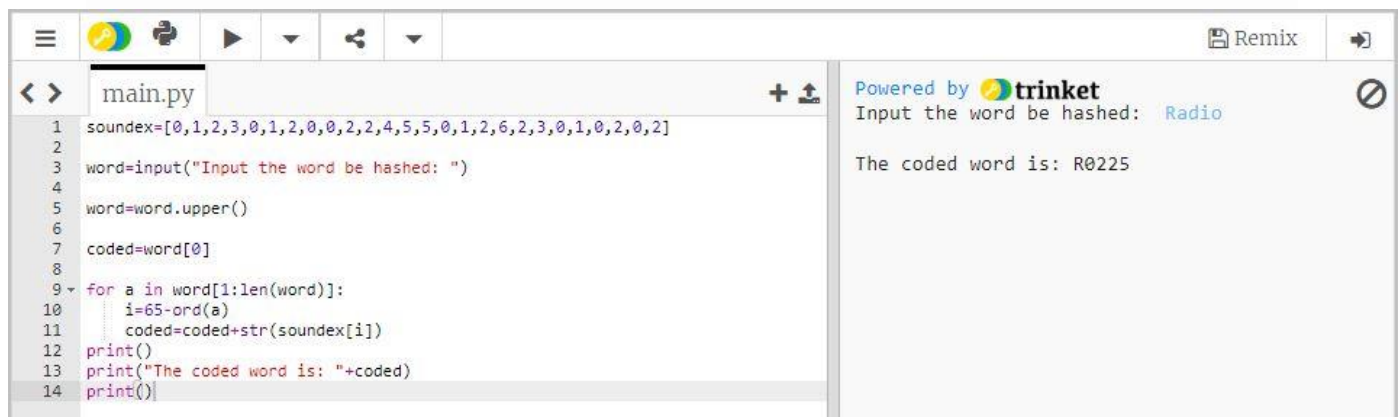
```
    i=65-ord(a)
```

```
    coded=coded+str(soundex[i])
```

```
print()
```


```
print("The coded word is: "+coded)
```

```
print()
```



The screenshot shows a Trinket Python IDE interface. On the left, a code editor displays a Python script named 'main.py'. The script defines a 'soundex' list, takes user input for a word, converts it to uppercase, and then iterates through the word (starting from the second character) to build a 'coded' string based on the 'soundex' list. The script includes print statements to show the intermediate 'coded' string and the final result. On the right, the output console shows the program's execution with the input 'Radio' and the resulting coded word 'R0225'. The interface includes standard IDE controls like a menu, run button, and a 'Remix' link.

```
1 soundex=[0,1,2,3,0,1,2,0,0,2,2,4,5,5,0,1,2,6,2,3,0,1,0,2,0,2]
2
3 word=input("Input the word be hashed: ")
4
5 word=word.upper()
6
7 coded=word[0]
8
9 for a in word[1:len(word)]:
10     i=65-ord(a)
11     coded=coded+str(soundex[i])
12 print()
13 print("The coded word is: "+coded)
14 print()
```

Powered by  trinket
Input the word be hashed: Radio
The coded word is: R0225