

MCQ

1. Who developed Python Programming Language?

- a) Wick van Rossum
- b) Rasmus Lerdorf
- c) Guido van Rossum
- d) Niene Stom

2. Which type of Programming does Python support?

- a) object-oriented programming
- b) structured programming
- c) functional programming
- d) all of the mentioned

3. Is Python case sensitive when dealing with identifiers?

- a) no
- b) yes
- c) machine dependent
- d) none of the mentioned

4. Which of the following is the correct extension of the Python file?

- a) .python
- b) .pl
- c) .py
- d) .p

5. Is Python code compiled or interpreted?

- a) Python code is both compiled and interpreted
- b) Python code is neither compiled nor interpreted
- c) Python code is only compiled
- d) Python code is only interpreted

6. All keywords in Python are in _____

- a) Capitalized
- b) lower case
- c) UPPER CASE
- d) None of the mentioned

7. What will be the value of the following Python expression?

$4 + 3 \% 5$

- a) 7
- b) 2
- c) 4
- d) 1

8. Which of the following is used to define a block of code in Python language?

- a) Indentation
- b) Key

- c) Brackets
- d) All of the mentioned

9. Which keyword is used for function in Python language?

- a) Function
- b) Def
- c) Fun
- d) Define

10. Which of the following character is used to give single-line comments in Python?

- a) //
- b) #
- c) !
- d) /*

11. What will be the output of the following Python code?

```
i = 1
while True:
    if i%3 == 0:
        break
    print(i)

    i + = 1
```

- a) 1 2 3
- b) error
- c) 1 2
- d) none of the mentioned

12. Which of the following functions can help us to find the version of python that we are currently working on?

- a) sys.version(1)
- b) sys.version(0)
- c) sys.version()
- d) sys.version

13. Python supports the creation of anonymous functions at runtime, using a construct called _____

- a) pi
- b) anonymous
- c) lambda
- d) none of the mentioned

14. What is the order of precedence in python?

- a) Exponential, Parentheses, Multiplication, Division, Addition, Subtraction
- b) Exponential, Parentheses, Division, Multiplication, Addition, Subtraction
- c) Parentheses, Exponential, Multiplication, Division, Subtraction, Addition
- d) Parentheses, Exponential, Multiplication, Division, Addition, Subtraction

15. What will be the output of the following Python code snippet if x=1?

```
x<<2
```

- a) 4
- b) 2
- c) 1
- d) 8

16. What does pip stand for python?

- a) unlimited length
- b) all private members must have leading and trailing underscores
- c) Preferred Installer Program
- d) none of the mentioned

17. Which of the following is true for variable names in Python?

- a) underscore and ampersand are the only two special characters allowed
- b) unlimited length
- c) all private members must have leading and trailing underscores
- d) none of the mentioned

18. What are the values of the following Python expressions?

```
2**(3**2)
(2**3)**2
2**3**2
```

- a) 512, 64, 512
- b) 512, 512, 512
- c) 64, 512, 64
- d) 64, 64, 64

19. Which of the following is the truncation division operator in Python?

- a) |
- b) //
- c) /
- d) %

20. What will be the output of the following Python code?

```
l=[1, 0, 2, 0, 'hello', '', []]
list(filter(bool, l))
```

- a) [1, 0, 2, 'hello', '', []]
- b) Error
- c) [1, 2, 'hello']
- d) [1, 0, 2, 0, 'hello', '', []]

21. Which of the following functions is a built-in function in python?

- a) factorial()
- b) print()
- c) seed()
- d) sqrt()

22. Which of the following is the use of id() function in python?

- a) Every object doesn't have a unique id
- b) Id returns the identity of the object
- c) All of the mentioned
- d) None of the mentioned

23. The following python program can work with ____ parameters.

```
def f(x):  
    def f1(*args, **kwargs):  
        print("Sanfoundry")  
        return x(*args, **kwargs)  
    return f1
```

- a) any number of
- b) 0
- c) 1
- d) 2

24. What will be the output of the following Python function?

```
min(max(False,-3,-4), 2,7)
```

- a) -4
- b) -3
- c) 2
- d) False

25. Which of the following is not a core data type in Python programming?

- a) Tuples
- b) Lists
- c) Class
- d) Dictionary

26. What will be the output of the following Python expression if x=56.236?

```
print("%.2f"%x)
```

- a) 56.236
- b) 56.23
- c) 56.0000
- d) 56.24

27. Which of these is the definition for packages in Python?

- a) A set of main modules
- b) A folder of python modules
- c) A number of files containing Python definitions and statements
- d) A set of programs making use of Python modules

28. What will be the output of the following Python function?

```
len(["hello",2, 4, 6])
```

- a) Error
- b) 6
- c) 4
- d) 3

29. What will be the output of the following Python code?

```
x = 'abcd'
for i in x:
    print(i.upper())
```

- a) a B C D
- b) a b c d
- c) error
- d) A B C D

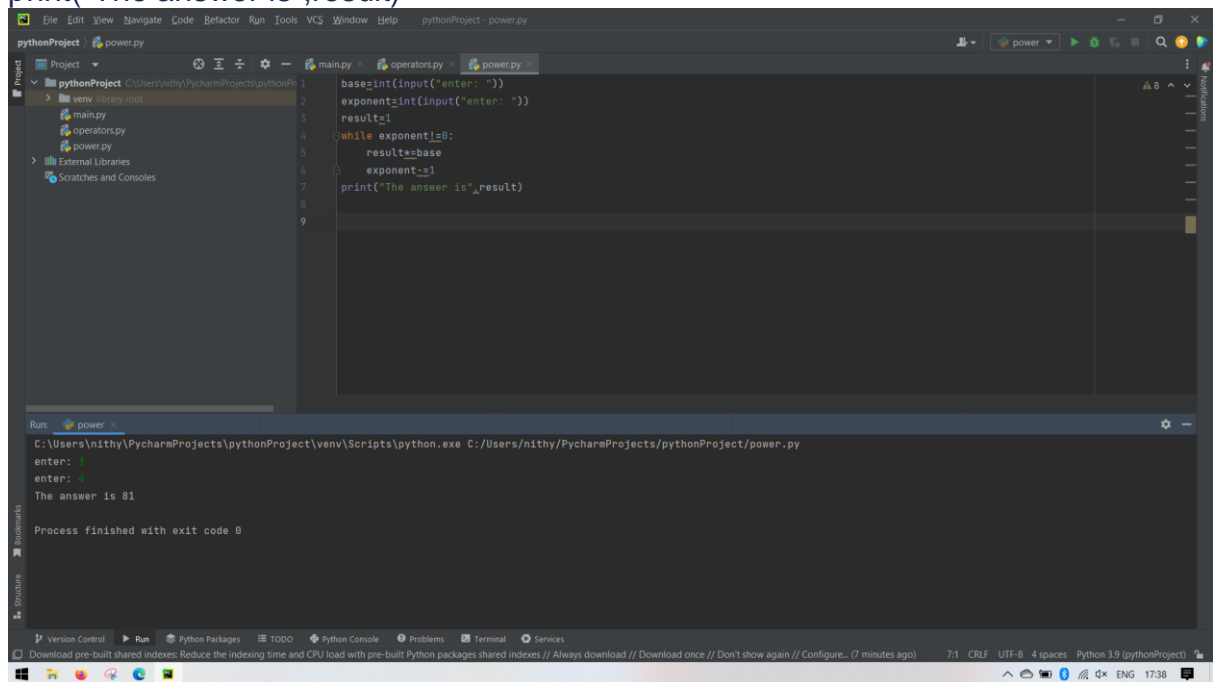
30. What is the order of namespaces in which Python looks for an identifier?

- a) Python first searches the built-in namespace, then the global namespace and finally the local namespace
- b) Python first searches the built-in namespace, then the local namespace and finally the global namespace
- c) Python first searches the local namespace, then the global namespace and finally the built-in namespace
- d) Python first searches the global namespace, then the local namespace and finally the built-in namespace

PROBLEM

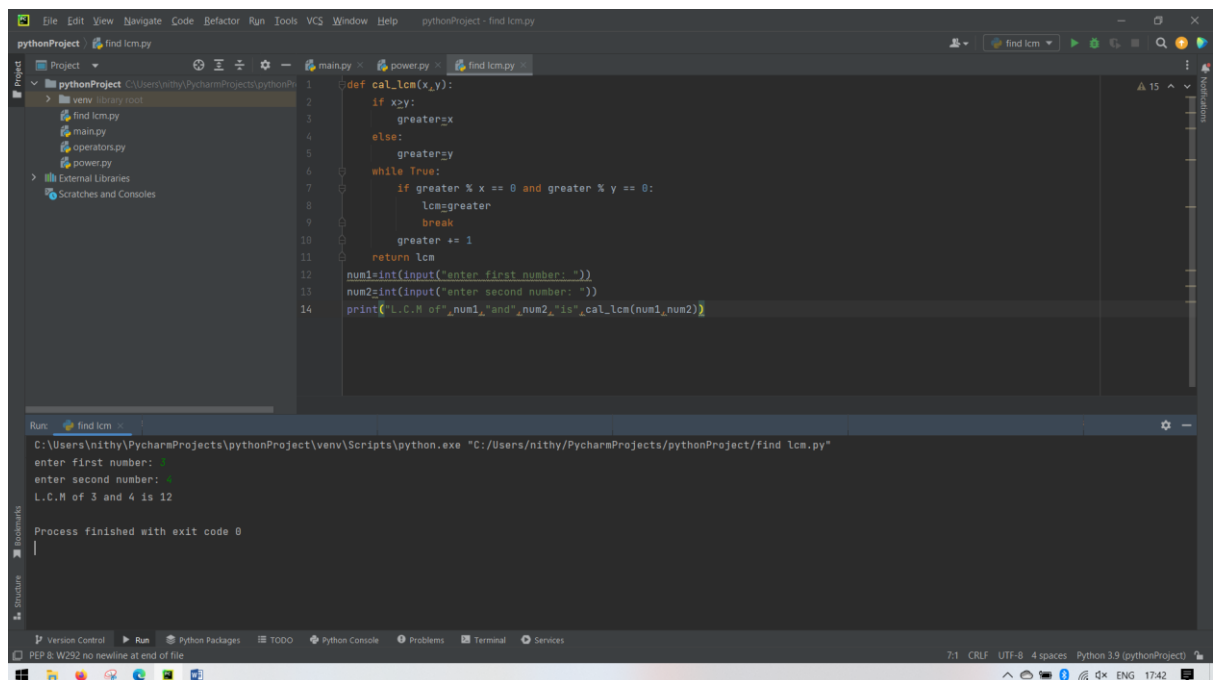
1. Python Program to Compute the Power of a Number

```
base=int(input("enter: "))
exponent=int(input("enter: "))
result=1
while exponent!=0:
    result*=base
    exponent-=1
print("The answer is",result)
```



2. [Python Program to Find LCM](#)

```
def cal_lcm(x,y):
    if x>y:
        greater=x
    else:
        greater=y
    while True:
        if greater % x == 0 and greater % y == 0:
            lcm=greater
            break
        greater += 1
    return lcm
num1=int(input("enter first number: "))
num2=int(input("enter second number: "))
print("L.C.M of",num1,"and",num2,"is",cal_lcm(num1,num2))
```



The screenshot shows the PyCharm IDE with the file `find_lcm.py` open. The code in the editor is as follows:

```
1 def cal_lcm(x,y):
2     if x>y:
3         greater=x
4     else:
5         greater=y
6     while True:
7         if greater % x == 0 and greater % y == 0:
8             lcm=greater
9             break
10        greater += 1
11    return lcm
12 num1=int(input("enter first number: "))
13 num2=int(input("enter second number: "))
14 print("L.C.M of",num1,"and",num2,"is",cal_lcm(num1,num2))
```

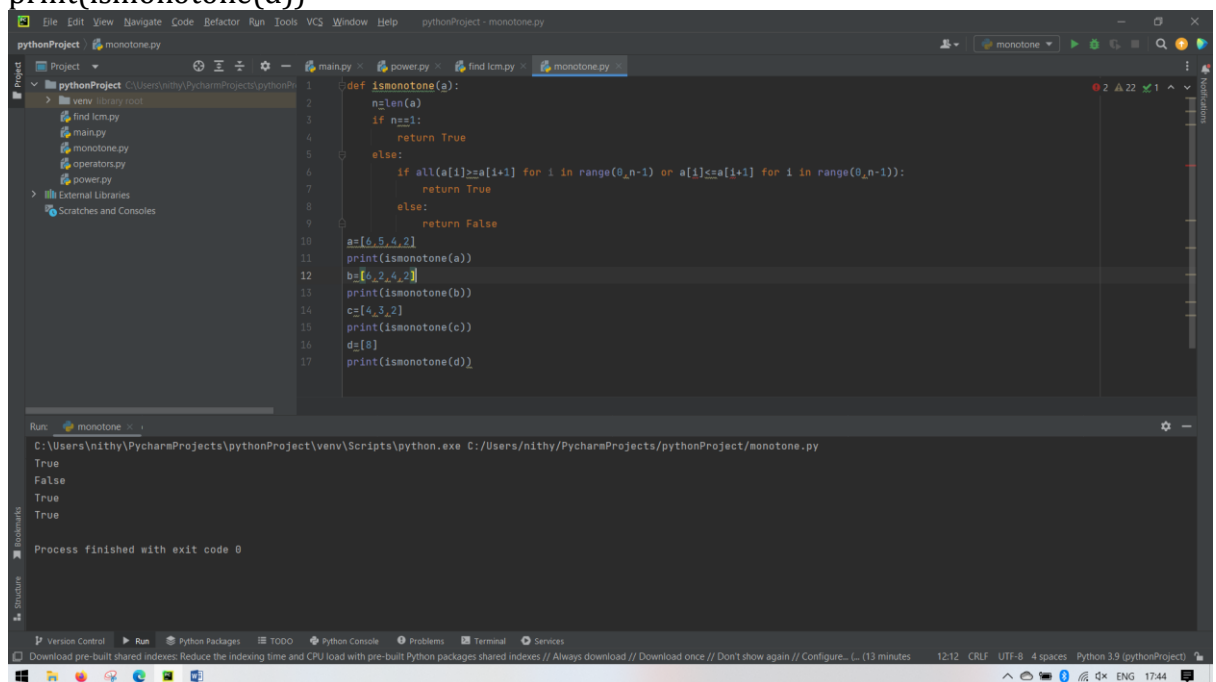
The Run window at the bottom shows the execution output:

```
C:\Users\nithy\PycharmProjects\pythonProject\venv\Scripts\python.exe "C:/Users/nithy/PycharmProjects/pythonProject/find_lcm.py"
enter first number:
enter second number:
L.C.M of 3 and 4 is 12
Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, line endings are CRLF, and the Python version is 3.9.

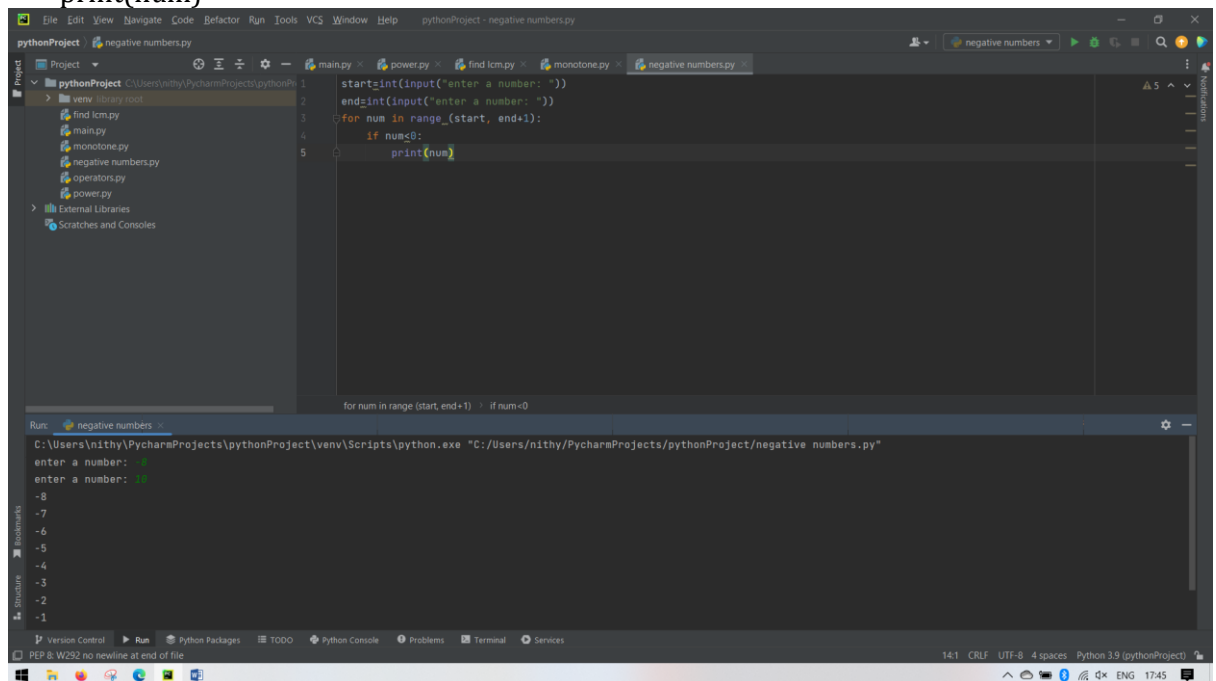
3. [Python Program to check if given array is Monotonic](#)

```
def ismonotone(a):
    n=len(a)
    if n==1:
        return True
    else:
        if all(a[i]>=a[i+1] for i in range(0,n-1)) or a[i]<=a[i+1] for i in range(0,n-1)):
            return True
        else:
            return False
a=[6,5,4,2]
print(ismotone(a))
b=[6,2,4,2]
print(ismotone(b))
c=[4,3,2]
print(ismotone(c))
d=[8]
print(ismotone(d))
```



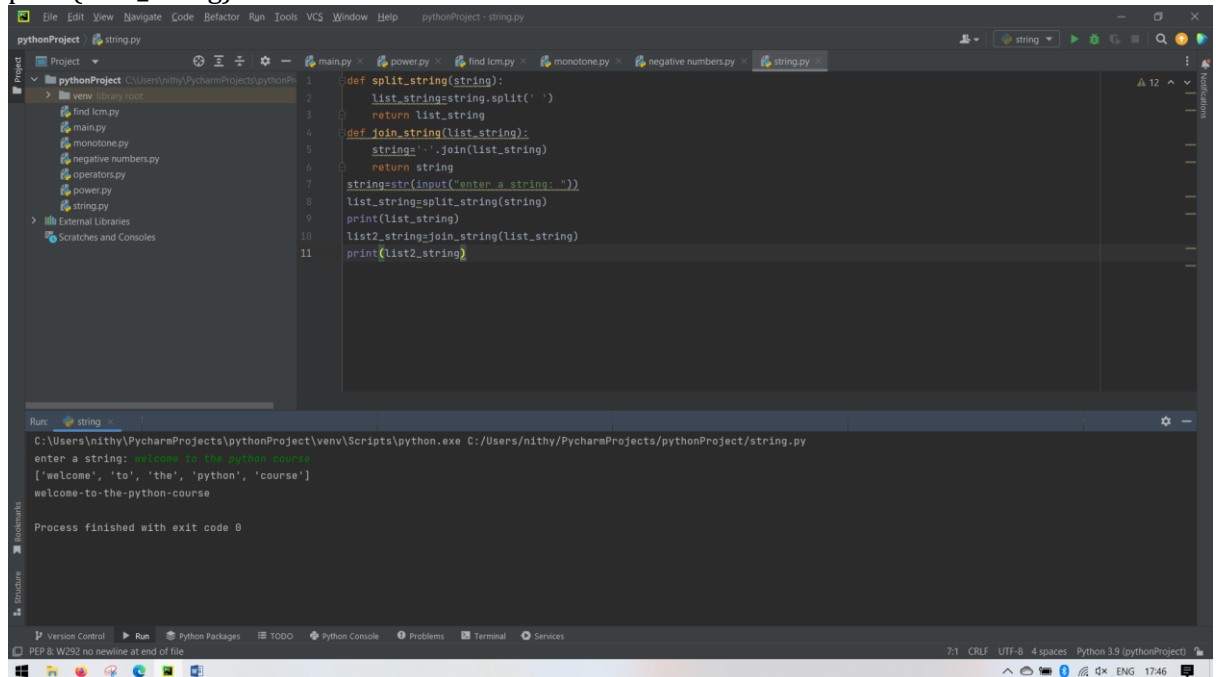
4. [Python program to print all negative numbers in a range](#)

```
start=int(input("enter a number: "))
end=int(input("enter a number: "))
for num in range (start, end+1):
    if num<0:
        print(num)
```



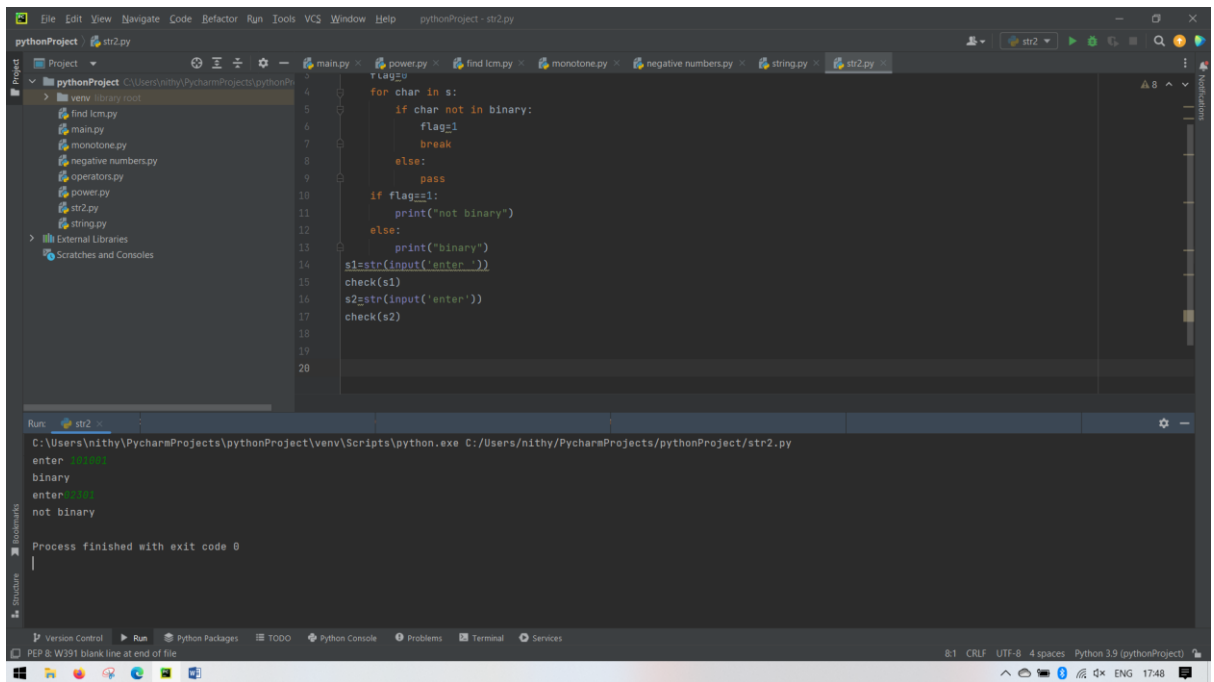
5. A. [Python program to split and join a string](#)

```
def split_string(string):
    list_string=string.split(' ')
    return list_string
def join_string(list_string):
    string='-'.join(list_string)
    return string
string=str(input("enter a string: "))
list_string=split_string(string)
print(list_string)
list2_string=join_string(list_string)
print(list2_string)
```

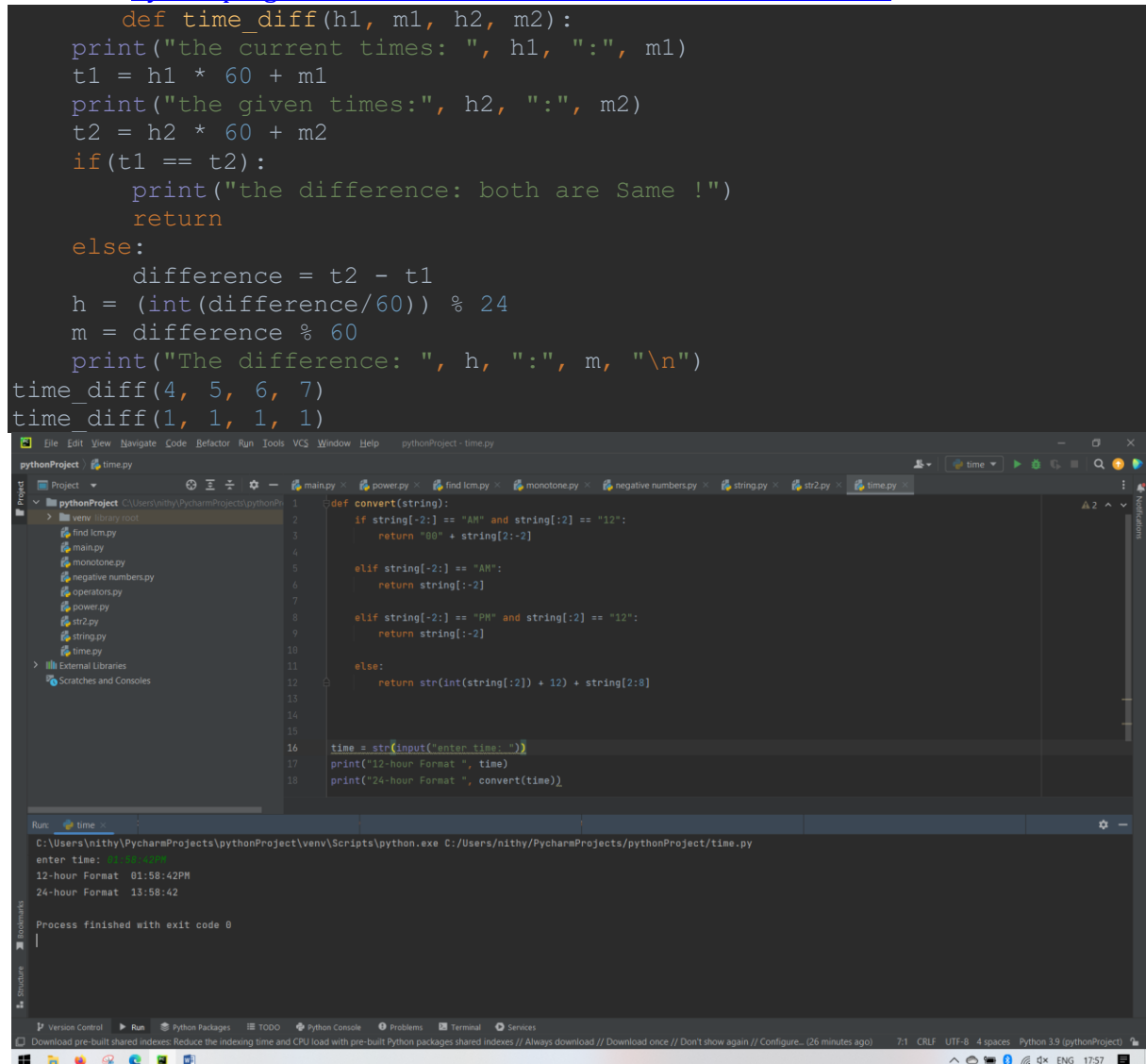


B. [Python | Check if a given string is binary string or not](#)

```
def check(s):
    binary="01"
    flag=0
    for char in s:
        if char not in binary:
            flag=1
            break
        else:
            pass
    if flag==1:
        print("not binary")
    else:
        print("binary")
s1=str(input('enter '))
check(s1)
s2=str(input('enter'))
check(s2)
```



6. A. [Python program to convert time from 12 hour to 24 hour format](#)



B. Python program to find difference between current time and given time

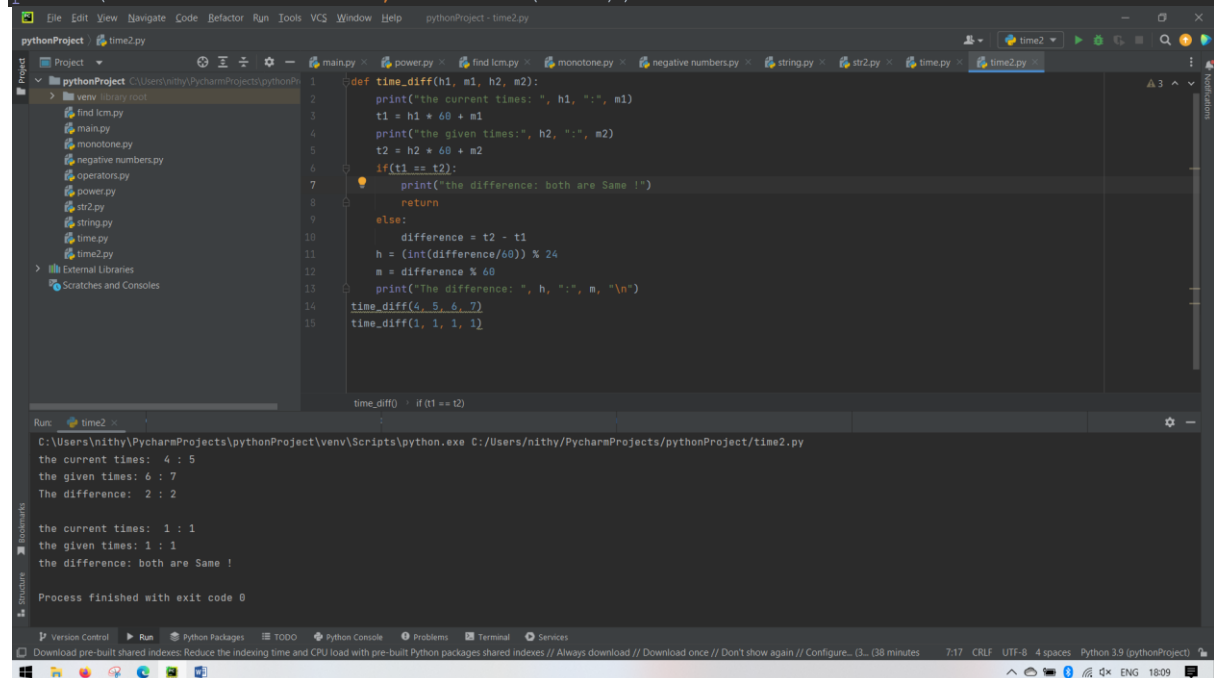
```
def convert(string):
    if string[-2:] == "AM" and string[:2] == "12":
        return "00" + string[2:-2]

    elif string[-2:] == "AM":
        return string[:-2]

    elif string[-2:] == "PM" and string[:2] == "12":
        return string[:-2]

    else:
        return str(int(string[:2]) + 12) + string[2:8]

time = str(input("enter time: "))
print("12-hour Format ", time)
print("24-hour Format ", convert(time))
```



The screenshot displays the PyCharm IDE with a project named 'pythonProject'. The file explorer on the left shows various Python files. The main editor window displays the 'time2.py' file, which contains the following code:

```
def time_diff(h1, m1, h2, m2):
    print('the current times: ', h1, ':', m1)
    t1 = h1 * 60 + m1
    print('the given times: ', h2, ':', m2)
    t2 = h2 * 60 + m2
    if(t1 == t2):
        print("the difference: both are Same !")
        return
    else:
        difference = t2 - t1
        h = (int(difference/60)) % 24
        m = difference % 60
        print("The difference: ", h, ":", m, "\n")
    time_diff(4, 5, 6, 7)
    time_diff(1, 1, 1, 1)
```

The Run console at the bottom shows the execution results:

```
C:\Users\nithy\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\nithy\PycharmProjects\pythonProject\time2.py
the current times: 4 : 5
the given times: 6 : 7
The difference: 2 : 2

the current times: 1 : 1
the given times: 1 : 1
the difference: both are Same !

Process finished with exit code 0
```

The status bar at the bottom indicates the file encoding is UTF-8, the line length is 80, and the Python version is 3.9.