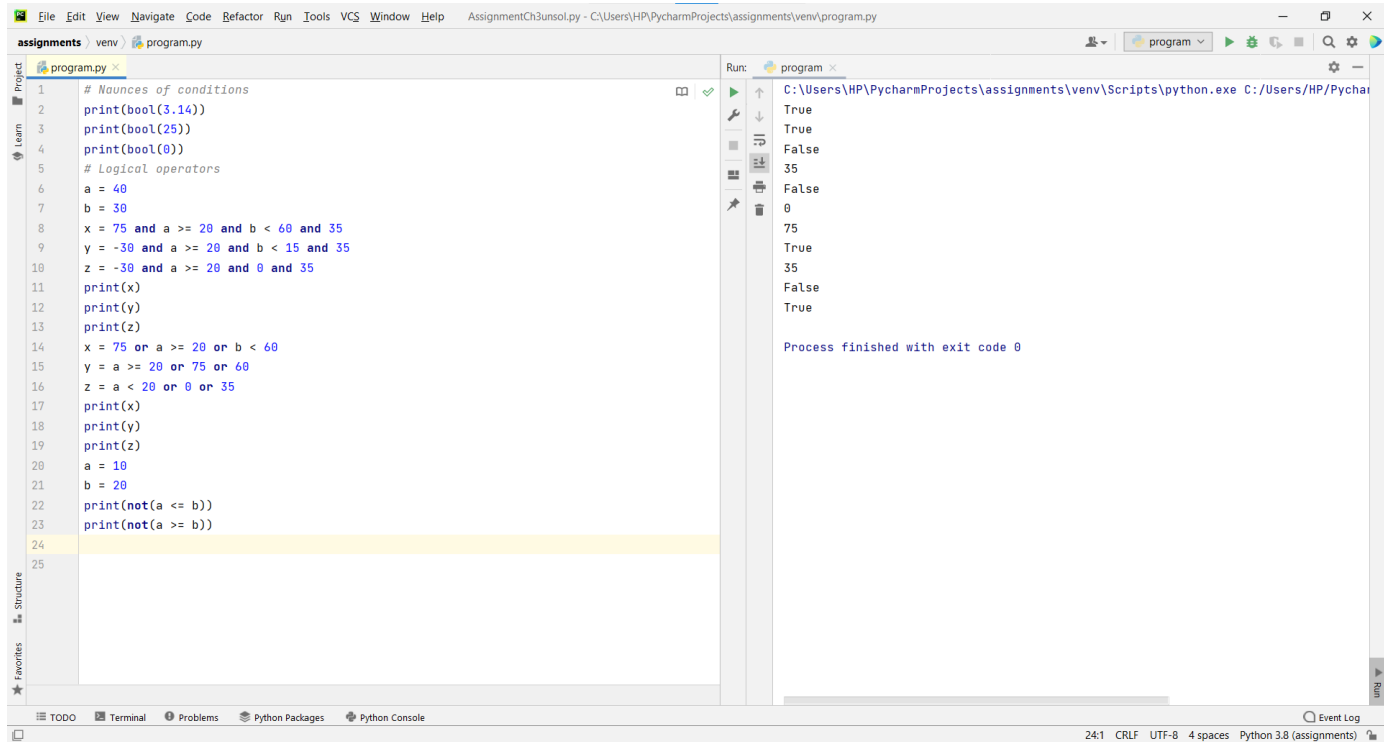


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Subject: Python Programming

Solved Program Assignment -3



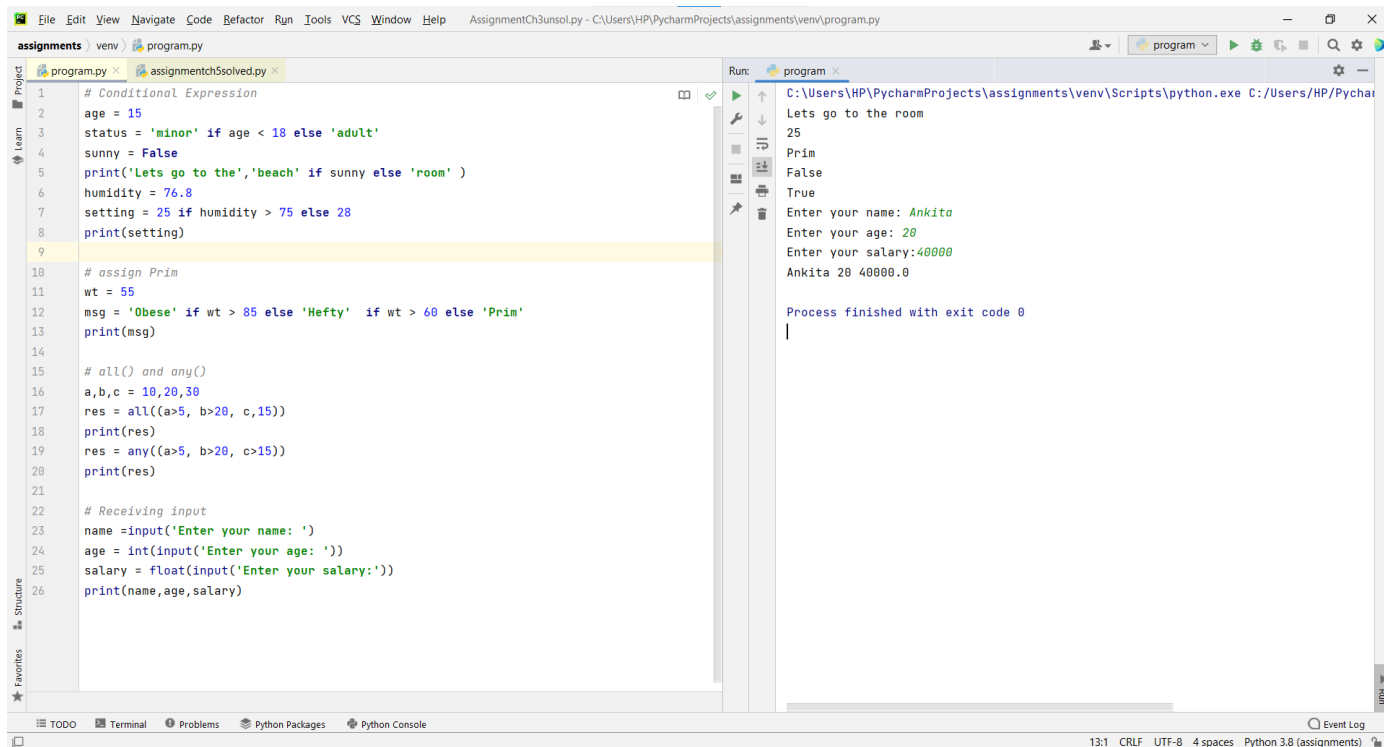
The screenshot shows the PyCharm IDE with a Python file named `program.py`. The code defines variables `a` and `b` and uses logical operators (`and`, `or`, `not`) to evaluate conditions. The output window shows the results of these evaluations.

```
1 # Naunces of conditions
2 print(bool(3.14))
3 print(bool(25))
4 print(bool(0))
5 # Logical operators
6 a = 40
7 b = 30
8 x = 75 and a >= 20 and b < 60 and 35
9 y = -30 and a >= 20 and b < 15 and 35
10 z = -30 and a >= 20 and 0 and 35
11 print(x)
12 print(y)
13 print(z)
14 x = 75 or a >= 20 or b < 60
15 y = a >= 20 or 75 or 60
16 z = a < 20 or 0 or 35
17 print(x)
18 print(y)
19 print(z)
20 a = 10
21 b = 20
22 print(not(a <= b))
23 print(not(a >= b))
24
25
```

Run: program

```
True
True
False
35
False
0
75
True
35
False
True

Process finished with exit code 0
```



The screenshot shows the PyCharm IDE with a Python file named `assignmentch3solved.py`. The code includes conditional expressions, assignments, and input handling. The output window shows the results of these operations.

```
1 # Conditional Expression
2 age = 15
3 status = 'minor' if age < 18 else 'adult'
4 sunny = False
5 print('Lets go to the','beach' if sunny else 'room' )
6 humidity = 76.8
7 setting = 25 if humidity > 75 else 28
8 print(setting)
9
10 # assign Prim
11 wt = 55
12 msg = 'Obese' if wt > 85 else 'Hefty' if wt > 60 else 'Prim'
13 print(msg)
14
15 # all() and any()
16 a,b,c = 10,20,30
17 res = all((a>5, b>20, c>15))
18 print(res)
19 res = any((a>5, b>20, c>15))
20 print(res)
21
22 # Receiving input
23 name =input('Enter your name: ')
24 age = int(input('Enter your age: '))
25 salary = float(input('Enter your salary:'))
26 print(name,age,salary)
```

Run: program

```
Lets go to the room
Prim
False
True
Enter your name: Ankita
Enter your age: 20
Enter your salary:40000
Ankita 20 40000.0

Process finished with exit code 0
```

File Edit View Navigate Code Refactor Run Tools VCS Window Help AssignmentCh3unsol.py - C:\Users\HP\PycharmProjects\assignments\venv\program.py

assignments venv program.py

```
1 '''While purchasing certain items, a discount of 10% is offered if the quantity purchased is more than
2 1000. If quantity and price per item are input through the keyboard, write a program to calculate the
3 total expenses'''
4
5 qty = int(input('Enter value of quantity'))
6 price = float(input('Enter value of price'))
7 if qty > 1000:
8     dis = 10
9 else:
10     dis = 0
11 totexp = qty * price - qty * price * dis / 100
12 print('Total expenses = Rs.' + str(totexp))
13
```

Run: program x

C:\Users\HP\PycharmProjects\assignments\venv\Scripts\python.exe

Enter value of quantity5
Enter value of price200
Total expenses = Rs.1000.0

Process finished with exit code 0

13:1 CRLF UTF-8 4 spaces Python 3.8 (assignments)

File Edit View Navigate Code Refactor Run Tools VCS Window Help AssignmentCh3unsol.py - C:\Users\HP\PycharmProjects\assignments\venv\program.py

assignments venv program.py

```
1 ''' In a company an employee is as under:
2 If the basic salary is less than Rs.1500, then HRA = 10% of basic salary and DA=90% of basic salary.
3 If his salary is either equal to or above Rs.1500, then HRA = Rs.500 and DA = 98% of basic salary.
4 If the employees salary is input through the leyboard write a program to find his gross salary.'''
5
6 bs = int(input('Enter value of bs:'))
7 if bs > 1000:
8     hra = bs * 15/100
9     da = bs * 95/100
10    ca = bs * 10/100
11 else:
12     hra = bs * 10 / 100
13     da = bs * 90/ 100
14     ca = bs * 5 / 100
15 gs = bs + da + hra + ca
16 print('Gross Salary= Rs.'+str(gs))
17
18
```

Run: program x

C:\Users\HP\PycharmProjects\assignments\venv\Scripts\python.exe

Enter value of bs:25000
Gross Salary= Rs.55000.0

Process finished with exit code 0

6:1 CRLF UTF-8 4 spaces Python 3.8 (assignments)

File Edit View Navigate Code Refactor Run Tools VCS Window Help AssignmentCh3unsol.py - C:\Users\HP\PycharmProjects\assignments\venv\program.py

assignments venv program.py

```
1 '''Percentage marks obtained by a student are input through the keyboard.
2 The student gets a division as per the following rules:
3 Percentage above or equal to 60 - First division
4 Percentage between 50 and 59 - Second division
5 Percentage between 40 and 49 - Third division
6 Percentage less than 40 - Fail
7 Write a program to calculate the division obtained by the student.'''
8
9 per = int(input('Enter value of percentage:'))
10 if per >= 60:
11     print('First Division')
12 elif per >= 50:
13     print('Second Division')
14 elif per >= 40:
15     print('Third Division')
16 else:
17     print('Fail')
18
```

Run: program

C:\Users\HP\PycharmProjects\assignments\venv\Scripts\python.exe C:/Us
Enter value of percentage:80
First Division
Process finished with exit code 0

6:1 CRLF UTF-8 4 spaces Python 3.8 (assignments)

File Edit View Navigate Code Refactor Run Tools VCS Window Help AssignmentCh3unsol.py - C:\Users\HP\PycharmProjects\assignments\venv\program.py

assignments venv program.py

```
1 '''A company insures its drivers in the following cases:
2 - If the driver is married.
3 - If the driver is unmarried, male & above 30 years of age.
4 - If the driver is unmarried, female & above 25 years of age.
5 In all other cases, the driver is not insured. If the marital status, sex and age of
6 the driver are the inputs, write a program to determine whether the driver should
7 be insured or not.'''
8
9 ms = input('Enter marital status:')
10 s = input('Enter sex:')
11 age = int(input('Enter age:'))
12 if (ms == 'm') or (ms == 'u' and s == 'm' and age > 30) \
13     or (ms == 'u' and s == 'f' and age > 25):
14     print('Insured')
15 else:
16     print('Not Insured')
17
```

Run: program

C:\Users\HP\PycharmProjects\assignments\venv\Scripts\python.e
Enter marital status:u
Enter sex:m
Enter age:25
Not Insured
Process finished with exit code 0

8:1 CRLF UTF-8 4 spaces Python 3.8 (assignments)

