ITEC-425 / SENG-425 : Python Programming (Lab)

Lab 3: Conditional Execution (using if, if/else, if/elif/else)

1. **Write a pay computation program that prompts the user for 'hours worked' and 'rate per hour' and computes the gross pay. Your program should compute the pay by giving the employee 1.5 times the regular rate for the hours worked above 40 hours.**

   Possible executions:

```
Enter hours: 10
Enter rate: 2
Pay is:  20.0


Enter hours: 45
Enter rate: 2
Pay is:  95.0
```

   Your code:

2. **Rewrite the above pay calculation program using try and except so that the program handles non-numeric input gracefully by printing a message and exiting the program.**

Possible executions:

```
Enter hours: 20
Enter rate: 2
Pay is:  40.0


Enter hours: ten
Error, please enter numeric input


Enter hours: 10
Enter rate: two
Error, please enter numeric input
```

Your code:

3. **Write a program to prompt for a score between 0.0 and 1.0. If the score is out of range, print an error message. If the score is between 0.0 and 0.1, print a grade according to these rules:**

If Score is:	Then Grade is:
>= 0.9	A
>= 0.8	B
>= 0.7	C
>= 0.6	D
< 0.6	F

Possible executions:

```
Enter score between 0.0 and 1.0: 0.95
A


Enter score between 0.0 and 1.0: 12
Bad score


Enter score between 0.0 and 1.0: 0.75
C


Enter score between 0.0 and 1.0: excellent
Bad score


Enter score between 0.0 and 1.0: 0.5
F
```

Your code:

Solutions

Task 1

```
hours = int(input("Enter hours: "))
rate = float(input("Enter rate: "))

pay = 0.0

if (hours <= 40):
    pay = hours * rate
else:
    overtime = hours - 40
    pay = 40 * rate + overtime * rate * 1.5

print("Pay is: ", pay)
```

Task 2

```
try:
    hours = int(input("Enter hours: "))
    rate = float(input("Enter rate: "))
    pay = 0.0
    if (hours <= 40):
        pay = hours * rate
    else:
        overtime = hours - 40
        pay = 40 * rate + overtime * rate * 1.5
    print("Pay is: ", pay)
except:
    print("Error, please enter numeric input")
```

Task 3

```
try:
    score = float(input("Enter score between 0.0 and 1.0: "))
    grade = ''

    if score >= 0.9 and score <= 1.0:
        grade = 'A'
```

```
        elif score >= 0.8 and score < 0.9:
            grade = 'B'
        elif score >= 0.7 and score < 0.8:
            grade = 'C'
        elif score >= 0.6 and score < 0.7:
            grade = 'D'
        elif score < 0.6:
            grade = 'F'
        else:
            grade = 'Bad score'

        print(grade)
    except:
        print('Bad score')
```