

Assignment 3 – Conditional Statement, Loops, and Strings

1. Write a program that calculates price including Tax for a given product; the program should prompt the user to insert the product's price and the program will return Tax and product's price including Tax. *Tax is 8%.*

Sample program:

```
What is the product's price?
```

```
56
```

```
Tax: 4.48
```

```
Price including Tax: 60.48
```

2. Write a program that will take a random guess and ask the user to guess the random number generated; if match print "match" otherwise print your guess was smaller or greater.

THE PROGRAM SHOULD GENERATE A RANDOM NUMBER AND NOT DISPLAY IT

```
Enter a guess between 1 and 10
```

```
8
```

```
Your guess was greater. The initial random guess was 7
```

3. Write a program that calculates an employee salary: daily, weekly, bi-weekly, and monthly. The program should prompt the user to enter hourly rate, how many hours of work per day (daily), then multiply by 5 for weekly, and so on. (Note, 20 working days a month).

Sample program:

```
Enter your hourly rate:
```

```
20
```

```
How many hours do you work per day?
```

```
8
```

```
Your daily rate is: $160
```

```
Your weekly salary is: $800
```

```
Your bi-weekly salary is: $1600
```

```
Your monthly salary is: $3200
```

4. At Saint Joseph's University, employees' email address contains the first letter of the first name and 7 characters long last name. Saint Joseph's University will issue an 8 characters long email address followed by the domain name. For example, My full name is greater than 8 characters (Ameen Abdel Hai), so the university issued an email such that it contains the first letter of my first name and 7 letters of my surname, such that it is aabdelha@sju.edu. Write a program that asks the user to enter first name and last name and issue an SJU email address.

Sample program:

```
Enter your first name:
```

```
Ameen
```

```
Enter your surname:
```

```
Abdel Hai
```

```
Your email address is: aabdelha@sju.edu
```

5. Modify program 3 so that, the program will print a menu to allow the user to choose daily, weekly, bi-weekly, or monthly salary.

Sample program:

```
Enter your hourly rate:
```

```
20
```

```
Enter how many hours you work per day:
```

```
8
```

```
Choose from the main menu:
```

```
1 - daily
```

```
2 - weekly
```

```
3 - bi-weekly
```

```
4 - monthly
```

```
2
```

```
Your weekly salary is: $800
```

6. **Extra Credit** – Write a program that will verify that the user enters a valid email address. It is obvious that, every email address should include:

XXXXX@ORGANIZATION NAME.COM

DOMAIN

Sample programs:

Enter your email address:

@gmail.com

The email address entered is invalid

Enter your email address:

aabdelha@sju.edu

Valid email address

Enter your email address:

Aabdelhasju.edu

Invalid email address

Enter your email address:

aabdelha@sjunet.

Invalid email address

Due date: September 18th at 12:30PM. Read the policy on my site for late submissions.

Requirements: Add the following block comment at the very beginning of your source code (your python (.py) files). If your program does not work as it is expected, or compiles error, include that in the block comment as well. Please note, you will lose points for not adding the following block comments to your source file. *Remember to comment your code as well.*

```
"""
```

```
Author:      Your name
Assignment:  Assignment 1 – strings
Date:       SUBMISSION DATE
Description: describe what the program does
Input:      input that the program expects
Output:     what does the program return

Errors:     WRITE HERE IF THERE IS ANY ERROR
```

```
"""
```

Send me a screenshot of the compiled code (terminal) and your source (.py file) code to me and our TA with the email subject **CSC115 assignment3**