**CS-111 Intro Structured Programming**

**Activity 2 – Constants, Variables and Statements**

1. Follow the steps of the pseudocode to create a program on Python.

* Create a variable, number1, and give it a value of 8.
* Create another variable, number2, and give it a value of 12.
* Add the two variables to create a third variable, number3.
* Add 6 to number 1 and 8 to number2.
* Multiply number1 and number2 and store the value in number3.
* Print each of the 3 variables with a message.

Ex: ‘The value for number1 is 54’

1. Write a program to find the average grade of four subjects; geography, history, math and science.

* Ask the user to enter the marks for each of the courses.
* Calculate the average grade.
* Print out the result with a message.

1. Write a program to accept radius of circle and display its area and circumference.

* Create a pinumber variable and give it a value of 3.
* Ask the user for the radius of the circle.
* Print out the circumference and the area of the circle with a message.

**“The circumference of the circle is … and its area is ….”**

*Circumference of a circle = 2πr*

*Area of circle = πr²*

1. Write a program to calculate the total amount the user needs to pay for some oranges and bananas.

* Decide on the price of each of these items.
* Ask the user how many of each item he/she bought.
* Calculate the final amount they need to pay and print it with a message.

**The total amount you need to pay is 48 dollars.**

1. Write a program to calculate the monthly pay of an employee. Get the input for the following and print out the monthly salary with a message.

* How many hours the employee works a day.
* How many days the employee works in a week.
* Create a rate variable and give it a value of 20 dollars.

**Your monthly salary is 1500 dollars.**

1. Write a program to calculate the check at a restaurant.

* The items on the menu have the following prices;
  + Individual pizzas $10
  + Soft drinks $2
  + Desserts $5.
* Calculate the check for a party of 3 who had 1 of each item.
* Calculate the tax amount to be added to the bill (7 percent sales tax).
* Calculate the tip (18 percent).
* Calculate the total bill and display all the information in the following format.

**HINT:** You can use the round function to round up the tax and tip if necessary. You can also limit the number of decimal points to two.

* + - * + round(tax, 2)

**Meal: $.....**

**Tax: $.....**

**Tip: $.....**

**Total Bill: $.....**