CAP4007- Python Programming /DCS3007- Introduction to Python Programming

1. Write a program to accept personal details, such as name, age city etc and display it back.
2. Write a program to read radius of a circle and print the area of the circle.
3. Write a program that declares 3 integers, determines and prints the largest and smallest in the group.
4. Write a program to calculate simple interest.
5. Write a program to accept an year from user and find whether given year is leap year or not.
6. Write a program to find the root to the quadratic equations
7. Write a program to implement linear search
8. Write a program to implement binary search.
9. Write a program to accept an integer and print sum of its digits.
10. Write a program to find factorial of a given number.
11. Write a program to find that given number is Palindrome or not.
12. Write a program to find that given number is Armstrong or not.
13. Write a program to print Fibonacci Series.
14. An ATM contains Indian Currency notes of 100,200,500 and 2000. Once the user enters amount to be withdrawn. Display the minimum number of notes required to dispense from the ATM.
15. Write nested if statements to print the appropriate message depending on the values of the variable temperature and humidity as given below; Assume that thte temperature can only be warm and cold and the humidity can only be dry and humid.

|  |  |  |
| --- | --- | --- |
| **If temperature is** | **If humidity is** | **Print this activity** |
| Warm | Dry | Play Cricket |
| Warm | Humid | Play Tenis |
| Cold | Dry | Basketball |
| Cold | Humid | Swim |

1. Write a program to convert decimal number into equivalent binary numbers.
2. Program to calculate average of numbers using function.
3. Write a function eval\_quad\_equation(a,b,c,x) which returns the value of the quadratic equation of the form
4. Write a function to accept a four digit number and print its sum of digits with recursion and without recursion.
5. Write a function to accept an integer and print factors of it.
6. Write a function cal\_gcd(a,b) that accepts two positive integers a and b and returns one integer as gcd (greatest common divisdor).
7. Write a program that accepts a string and prints it in reverse order.
8. Write a function that accepts a string and prints number of vowels in that string.
9. Write a proram that performs the following operations on a list.
   1. Find duplicate items in a list
   2. Find frequency of items in a list
   3. Finds average of items in the list.
   4. Finds index of largest number in the list
   5. Print the list in reverse order
   6. Deletes an item at a given position from the list.
   7. Delete all the items from the list.
10. Write A Program to Find the Area of a Rectangle Using Classes
11. Write A Program to Append, Delete and Display Elements of a List Using Classes
12. Write A Program to Create a Class and Compute the Area and the Perimeter of the Circle
13. Write A Program to Create a Class which Performs Basic Calculator Operations
14. Write A Program to Create a Class in which One Method Accepts a String from the User and Another Prints it.
15. Write A Program that Reads a Text File and Counts the Number of Times a Certain Letter Appears in the Text File.
16. Write A Program to Read a Text File and Print all the Numbers Present in the Text File
17. Write a program for generation of pyramid.