**Assignment-2**

**Topic: Decision Making Statements, Looping and Function Date: 12/09/24**

1. Write a program to calculate tax, given the following conditions:
   1. If income is less than 150000 then no tax
   2. If taxable income is in the range 150001 to 300000 then charge 10% tax
   3. If taxable income is in the range 300001 to 500000 then charge 20% tax
   4. If taxable income is above 500001 then charge 30% tax
2. Write a program to enter the marks of a student in 4 different subjects. Then display the grade of the student as per the following conditions:
   1. If the average mark is greater than or equal to 90 then grade is O
   2. If the average mark is greater than equal to 80 but less than 90 then grade is E
   3. If the average mark is greater than equal to 70 but less than 80 then grade is A
   4. If the average mark is greater than equal to 60 but less than 70 then grade is B
   5. If the average mark is greater than equal to 50 but less than 60 then grade is C
   6. If the average mark is less than 50 then grade is F
3. Write a program to calculate the roots of a quadratic equation.
4. Write a program to enter a number from 1 to 7 and display the corresponding day of the week using switch statement.
5. Write a program to find out the factorial of any inputted number.
6. Write a program to check whether an inputted number is prime or not.
7. Write a program to check whether an inputted number is palindrome or not.
8. Write a program to find out the binary equivalent of any inputted decimal number.
9. Write a program to display all Armstrong numbers from 1 to 10000.
10. Write a program to find out the largest between two numbers using a conditional operator.
11. Write a program to find out the largest between three numbers using the conditional operator.
12. Write a recursive program to find the sum of n natural numbers. [ n is user input ]
13. Write a recursive program to find the GCD of two inputted numbers.