**Assignment-2**

**Topic: Decision Making Statements, Looping and Array Date: 10.11.23**

Q1. Write a program to check whether an inputted number is positive or negative.

Q2. Write a program to test whether a number is positive, negative or equal to zero.

Q3. Write a program to calculate tax, given the following conditions:

If income is less than 150000 then no tax

If taxable income is in the range 150001 to 300000 then charge 10% tax

If taxable income is in the range 300001 to 500000 then charge 20% tax

If taxable income is above 500001 then charge 30% tax

Q4. 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:

If the average mark is greater than or equal to 90 then grade is O

If the average mark is greater than equal to 80 but less than 90 then grade is E

If the average mark is greater than equal to 70 but less than 80 then grade is A

If the average mark is greater than equal to 60 but less than 70 then grade is B

If the average mark is greater than equal to 50 but less than 60 then grade is C

If the average mark is less than 50 then grade is F

Q5. Write a program to calculate the roots of a quadratic equation.

Q6. Write a program to enter a number from 1 to 7 and display the corresponding day of the week

Using switch statement.

Q7. Write a program to find out the factorial of any inputted number.

Q8. Write a program to check whether an inputted number is prime or not.

Q9. Write a program to check whether an inputted number is palindrome or not.

Q10. Write a program to find out the binary equivalent of any inputted decimal number.

Q11. Write a program to display all Armstrong numbers between 1 to 10000.

Q12. Write a program to find the mean of n numbers using an array.

Q13. Write a program to find the largest of n numbers using array.

Q14. Write a program to sort an array of n integers using bubble sort.

Q15. Write a program that declares an array of n integers and searches an inputted element is present in the array or not. If present, then display the position of the element in the array.

Q16. Write a program to display the maximum and minimum element present in the array.

Q17. Write a program to interchange the largest and smallest element of any array.

Q18. Write a program to enter elements into a 2-D array and then display them.