Assignment - 3

Prasang Gajjar

Q1. Write a program to check whether a given number is positive or non-positive.

Ans :- #include <stdio.h>

**int** main()

{ **int** num ;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num<=0)

  printf("Non Positive");

  else

  printf("Positive");

  return 0;

}

Q2. Write a program to check whether a given number is divisible by 5 or not

Ans :- #include <stdio.h>

**int** main()

{ **int** num ;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num%5==0)

  printf("Divisible By 5");

  else

  printf("Not Divisible By 5");

  return 0;

}

Q3. Write a program to check whether a given number is an even number or an odd

number.

Ans :- #include <stdio.h>

**int** main()

{ **int** num ;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num%2==0)

  printf("Even No.");

  else

  printf("Odd No.");

  return 0;

}

Q4. Write a program to check whether a given number is an even number or an odd

number without using % operator.

Ans :- #include <stdio.h>

**int** main()

{ **int** num ;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num&1)

  printf("Odd Number");

  else

  printf("Even Number");

  return 0;

}

Q5. Write a program to check whether a given number is a three-digit number or not.

Ans :- #include <stdio.h>

**int** main()

{ **int** num, count = 0, i;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  while(num!=0)

  {

   num = num / 10 ;

   count = count + 1 ;

  }

  if(count==3)

  printf("3 Digit Number");

  else

  printf("Not a 3 Digit No");

  return 0;

}

Q6. Write a program to print greater between two numbers. Print one number of both are

the same.

Ans :- #include <stdio.h>

**int** main()

{ **int** num1,num2;

  printf("Enter First Number :- ");

  scanf("%d",&num1);

  printf("Enter Second Number :- ");

  scanf("%d",&num2);

  if(num1>=num2)

  { if(num1>num2)

    printf("Num 1 - %d is Greater",num1);

    if(num1==num2)

    printf("Both are Same");

  }

  else

  printf("Num 2 - %d is Greater",num2);

  return 0;

}

Q7. Write a program to check whether roots of a given quadratic equation are real &

distinct, real & equal or imaginary roots

Ans :- #include <stdio.h>

**int** main()

{ **int** a, b, c, D ;

  printf("Enter the Coefficients :- \n");

  scanf("%d%d%d",&a,&b,&c);

  D = b \* b - 4 \* a \* c ;

  if(D>=0)

  {

    if(D>0)

    printf("Real and Distict Roots");

    if(D=0)

    printf("Real and Equal Roots");

  }

  else

  printf("Imaginary Roots");

  return 0;

Q8. Write a program to check whether a given year is a leap year or not.

Ans :- **int** main()

{ **int** year;

  printf("Enter the Year :- \n");

  scanf("%d",&year);

  if(year%4==0&&year%100!=0||year%400==0)

  printf("It is a Leap Year - %d",year);

  else

  printf("Not a Leap Year");

  return 0;

}

Q9. Write a program to find the greatest among three given numbers. Print number once

if the greatest number appears two or three times.

Ans :- **int** main()

{ **int** a,b,c;

  printf("Enter Three Numbers :-\n");

  scanf("%d%d%d",&a,&b,&c);

  if(a>b&&a>c)

  printf("%d is Greatest",a);

  else

  if(b>a&&b>c)

  printf("%d is Greatest",b);

  else

  if(c>a&&c>b)

  printf("%d is Greatest",c);

  else

  if(a=b=c)

  printf("All are Same");44

  return 0;

}

Q10. Write a program which takes the cost price and selling price of a product from the

user. Now calculate and print profit or loss percentage.

Ans :- #include <stdio.h>

**int** main()

{ **int** SP,CP,Diff;

**float** Profit,Loss;

  printf("Enter Selling Price :- ");

  scanf("%d",&SP);

  printf("Enter Cost Price :- ");

  scanf("%d",&CP);

  if(SP>CP)

  {

    Diff = SP - CP ;

    Profit = Diff \* 100 / CP ;

    printf("Profit is %f%%",Profit);

  }

  else

  { Diff = CP - SP ;

    Loss = Diff \* 100 / CP ;

    printf("Loss is %f%%",Loss);

  }

  return 0;

}

Q11. Write a program to take marks of 5 subjects from the user. Assume marks are given

out of 100 and passing marks is 33. Now display whether the candidate passed the

examination or failed.

Ans :- #include <stdio.h>

**int** main()

{ **int** s1,s2,s3,s4,s5 ;

  printf("Enter Marks of 5 Subjects :- \n");

  scanf("%d%d%d%d%d",&s1,&s2,&s3,&s4,&s5);

  if(s1,s2,s3,s4,s5 >= 33)

  printf("Pass");

  else

  printf("Fail");

  return 0;

}

Q12. Write a program to check whether a given alphabet is in uppercase or lowercase.

Ans :- #include <stdio.h>

**int** main()

{ **char** Alpha;

  printf("Enter an Alphabet :- ");

  scanf("%c",&Alpha);

  printf("ASCII Code is %d\n",Alpha);

  if(65<=Alpha&&Alpha<=90)

  printf("Upper Case");

  else

  if(97<=Alpha&&Alpha<=112)

  printf("Lower Case");

  return 0;

}

Q13. Write a program to check whether a given number is divisible by 3 and divisible by 2.

Ans :- #include <stdio.h>

**int** main()

{ **int** num;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num%3==0&&num%2==0)

  printf("Divisible");

  else

  printf("Not Divisible");

  return 0;

}

Q14. Write a program to check whether a given number is divisible by 7 or divisible by 3.

Ans :- #include <stdio.h>

**int** main()

{ **int** n;

  printf("Enter a Number :- ");

  scanf("%d",&n);

  if(n%7==0||n%3==0)

  printf("Number is Divisible");

  else

  printf("Not Divisible");

  return 0;

}

Q15. Write a program to check whether a given number is positive, negative or zero.

#include <stdio.h>

**int** main()

{ **int** num;

  printf("Enter a Number :- ");

  scanf("%d",&num);

  if(num>0)

  printf("Positive Number");

  else if(num<0)

  printf("Negative Nubmer");

  else if(num==0)

  printf("Zero");

  return 0;

Q16. Write a program to check whether a given character is an alphabet (uppercase), an

alphabet (lower case), a digit or a special character.

Ans :- #include <stdio.h>

**int** main()

{ **char** Z;

  printf("Enter a Character :- ");

  scanf("%c",&Z);

  printf("ASCII Code is %d\n",Z);

  if(65<=Z&&Z<=90)

  printf("Upper Case");

  else if(97<=Z&&Z<=112)

  printf("Lower Case");

  else if(48<=Z&&Z<57)

  printf("Digit");

  else if(32<=Z&&Z<=47||58<=Z&&Z<=64||91<=Z&&Z<=96);

  printf("Special Character");

  return 0;

}

Q17.

Ans :- #include <stdio.h>

**int** main()

{ **int** a,b,c;

  printf("Enter Sides of Triangle :- ");

  scanf("%d%d%d",&a,&b,&c);

  if(a+b>c||b+c>a||a+c>b)

  printf("Triangle is Valid");

  else

  printf("Triangle is not Valid");

  return 0;

}

Q18.

Ans :- #include <stdio.h>

**int** main()

{

**int** month;

    printf("Enter month number (1-12): ");

    scanf("%d", &month);

    if(month==1 || month==3 || month==5 || month==7 || month==8 || month==10 || month==12)

    {

        printf("31 days");

    }

    else if(month==4 || month==6 || month==9 || month==11)

    {

        printf("30 days");

    }

    else if(month==2)

    {

        printf("28 or 29 days");

    }

    else

    {

        printf("Invalid input! Please enter month number between (1-12).");

    }

    return 0;

}