Assignment - 3 Decision Control Statements

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number");

scanf("%d",&x);

if(x>0)

printf("Number is positive");

else if(x<=0)

printf("Number is non-positive");

return 0;

}

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number");

scanf("%d",&x);

if(x%5==0)

printf("Number is divisible by 5");

else

printf("Number is not divisible by 5");

return 0;

}

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number");

scanf("%d",&x);

if(x%2==0)

printf("Number is even");

else

printf("Number is odd");

return 0;

}

1. Write a program to check whether a given number is an even number or an odd number without using % operator.

#include<stdio.h>

int main()

{

int x;

printf("Enter any number");

scanf("%d",&x);

if((x&1)==0)

printf("Number is even");

else

printf("Number is odd");

return 0;

}

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number");

scanf("%d",&x);

if(x>99&&x<1000)

printf("Number is three digits");

else

printf("Number is not three digits");

return 0;

}

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

#include<stdio.h>

int main()

{

int x,y;

printf("Enter two numbers");

scanf("%d %d",&x,&y);

if(x>y)

printf("greater number is %d",x);

else

printf("greater number is %d",y);

return 0;

}

1. Write a program to check whether roots of a given quadratic equation are real & distinct, real & equal or imaginary roots

#include<stdio.h>

int main()

{

int d,a,b,c;

printf("Enter value of a,b and c ");

scanf("%d %d %d",&a,&b,&c);

d=b\*b-4\*a\*c;

if(d>0)

printf("the roots are unequal and real");

else if(d<0)

printf("the roots is Imaginary");

else

printf("the roots are equal and real.");

return 0;

}

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

#include<stdio.h>

int main()

{

int y;

printf("Enter any year ");

scanf("%d",&y);

if(y%4==0&&y%400==0)

printf("Year is leap year");

else

printf("Year is not leap");

return 0;

}

1. Write a program to find the greatest among three given numbers. Print number once if the greatest number appears two or three times.

#include<stdio.h>

int main()

{

int a,b,c;

printf("Enter any three number");

scanf("%d%d%d",&a,&b,&c);

if(a>b)

{

if(a>c)

printf("greater number is %d",a);

else

printf("greater number is %d",c);

}

else

{

if(b>c)

printf("greater number is %d ",b);

else

printf("greater number is %d",c);

}

return 0;

}

1. 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.

#include<stdio.h>

int main()

{

float cp,sp,x,y;

printf("Enter value of cp and sp:-");

scanf("%f%f",&cp,&sp);

if(cp>sp)

{

x=(cp-sp)/cp\*100;

printf("percentage of loss is %f",x);

}

else

{

y=(sp-cp)/cp\*100;

printf("percentage of profit is %f",y);

}

return 0;

}

1. 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.

#include<stdio.h>

int main()

{

int a,b,c,d,e;

printf("Enter numbers of five subjects are:-");

scanf("%d%d%d%d%d",&a,&b,&c,&d,&e);

if(a>=33&&b>=33&&c>=33&&d>=33&&e>=33)

printf("Pass");

else

printf("Fail");

return 0;

}

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

#include<stdio.h>

int main()

{

char c;

printf("Enter any character");

scanf("%c",&c);

if ((97<=c)&&(c<=122))

printf("lower case");

if ((65<=c)&&(c<=90))

printf("upper case");

}

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number:-");

scanf("%d",&x);

if(x%2==0&&x%3==0)

printf("number is divisible by 3 and 2");

else

printf("number is not divisible by 3 and 2");

return 0;

}

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

#include<stdio.h>

int main()

{

int x;

printf("Enter any number:-");

scanf("%d",&x);

if(x%7==0||x%3==0)

printf("number is divisible by 7 and 3");

else

printf("number is not divisible by 7 and 3");

return 0;

}

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

#include<stdio.h>

int main()

{

int x;25

printf("Enter any number");

scanf("%d",&x);

if(x>0)

printf("Number is positive");

else if(x<0)

printf("Number is negative");

else

printf("Number is Zero");

return 0;

}

16. Write a program to check whether a given character is an alphabet (uppercase), an alphabet (lower case), a digit or a special character.

#include<stdio.h>

int main()

{

int ch;

printf("Enter any character:-");

scanf("%c",&ch);

if(ch>='a'&&ch<='z')

printf("character is lowercase");

else if(ch>='A'&&ch<='Z')

printf("character is uppercase");

else if(ch>='0'&&ch<='9')

printf("character is digit");

else

printf("special character ");

return 0;

}

17. Write a program which takes the length of the sides of a triangle as an input. Display whether the triangle is valid or not.

#include<stdio.h>

int main()

{

int a,b,c;

printf("Enter length of sides of a triangle a,b,and c is:-");

scanf("%d%d%d",&a,&b,&c);

if(a+b>c&&b+c>a&&c+a>b)

printf("The triangle is valid ");

else

printf("The triangle is not valid ");

return 0;

}

18. Write a program which takes the month number as an input and display number of days in that month

#include<stdio.h>

int main()

{

int m;

printf("Enter any month number:-");

scanf("%d",&m);

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

printf("number of days is 31");

else if(m==2)

printf("number of days is 28 or 29");

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

printf("number of days is 30");

else

printf("Invalid month");

return 0;

}