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

Sol – 1.

#include<stdio.h>

#include<conio.h>

int main()

{

int x;

printf("Enter a number : ");

scanf("%d",&x);

if(x>0)

printf("%d is Positive",x);

else

printf("%d is Negative",x);

getch();

return 0;

}

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

Sol – 2.

#include<stdio.h>

#include<conio.h>

int main()

{

int x;

printf("Enter a number : ");

scanf("%d",&x);

if(x%5==0)

printf("%d is divisible by 5",x);

else

printf("%d is not divisible by 5",x);

getch();

return 0;

}

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

number.

Sol – 3.

#include<stdio.h>

#include<conio.h>

int main()

{

int x;

printf("Enter a number : ");

scanf("%d",&x);

if(x%2==0)

printf("%d is Even",x);

else

printf("%d is Odd",x);

getch();

return 0;

}

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

number without using % operator.

Sol – 4.

#include<stdio.h>

#include<conio.h>

int main()

{

int x;

printf("Enter a number : ");

scanf("%d",&x);

if(x&1)

printf("%d is Odd",x);

else

printf("%d is Even",x);

getch();

return 0;

}

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

Sol – 5.

#include<stdio.h>

#include<conio.h>

int main()

{

int x;

printf("Enter a number : ");

scanf("%d",&x);

if(x>99&&x<1000)

printf("%d is a 3 digit number",x);

else

printf("%d is not a 3 digit number",x);

getch();

return 0;

}

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

the same.

Sol – 6.

#include<stdio.h>

#include<conio.h>

int main()

{

int x,y;

printf("Enter two numbers : ");

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

if(x>y)

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

else

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

getch();

return 0;

}

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

distinct, real & equal or imaginary roots

Sol – 7.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,c,d;

printf("Enter the value of x^2 , x and constant : ");

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

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

if(d>0)

printf("Roots are real and unequal");

else

{

if(d==0)

printf("Roots are real and equal");

else

printf("Roots are imaginary");

}

getch();

return 0;

}

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

Sol – 8.

#include<stdio.h>

#include<conio.h>

int main()

{

int a;

printf("Enter a year : ");

scanf("%d",&a);

if(a%100==0&&a%400!=0)

printf("%d is not a leap year",a);

else

{

if(a%4==0)

printf("%d is a leap year",a);

else

printf("%d is not a leap year",a);

}

getch();

return 0;

}

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

if the greatest number appears two or three times.

Sol – 9.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,c;

printf("Enter three numbers : ");

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

if(a>b)

{

if(a>c)

printf("%d is greatest",a);

else

printf("%d is greatest",c);

}

else

{

if(b>c)

printf("%d is greatest",b);

else

printf("%d is greatest",c);

}

getch();

return 0;

}

10. 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.

Sol – 10.

#include<stdio.h>

#include<conio.h>

int main()

{

float sp,cp,pp,lp;

printf("Enter Selling Price and Cost Price : ");

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

if(sp>cp)

{

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

printf("Profit percentage is : %f%%",pp);

}

if(cp>sp)

{

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

printf("Loss percentage is : %f%%",lp);

}

if(sp==cp)

printf("No profit No loss");

getch();

return 0;

}

11. 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.

Sol – 11.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,c,d,e;

printf("Enter marks of five subjects : ");

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

if(a>32&&b>32&&c>32&&d>32&&e>32)

printf("Congratulations! You are passed in examination");

else

printf("Sorry you are fail\nBetter luck next time!!");

getch();

return 0;

}

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

Sol – 12.

#include<stdio.h>

#include<conio.h>

int main()

{

char a;

printf("Enter an alphabet : ");

scanf("%c",&a);

if('A'<=a&&a<='Z')

printf("%c is in uppercase",a);

if(96<a&&a<123)

printf("%c is in lowercase",a);

getch();

return 0;

}

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

Sol – 13.

#include<stdio.h>

#include<conio.h>

int main()

{

int a;

printf("Enter a number : ");

scanf("%d",&a);

if(a%6==0)

printf("%d is divisible by 2 and 3",a);

else

{

if(a%2==0)

printf("%d is divisible by 2",a);

else

{

if(a%3==0)

printf("%d is divisible by 3",a);

else

printf("%d is not divisible by 2 and 3",a);

}

}

getch();

return 0;

}

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

Sol – 14.

#include<stdio.h>

#include<conio.h>

int main()

{

int a;

printf("Enter a number : ");

scanf("%d",&a);

if(a%21==0)

printf("%d is divisible by 7 and 3",a);

else

{

if(a%7==0)

printf("%d is divisible by 7",a);

else

{

if(a%3==0)

printf("%d is divisible by 3",a);

else

printf("%d is not divisible by 7 and 3",a);

}

}

getch();

return 0;

}

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

Sol – 15.

#include<stdio.h>

#include<conio.h>

int main()

{

int a;

printf("Enter a number : ");

scanf("%d",&a);

if(a>0)

printf("%d is positive",a);

else

{

if(a<0)

printf("%d is negative",a);

else

printf("Number is zero");

}

getch();

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.

Sol – 16.

#include<stdio.h>

#include<conio.h>

int main()

{

char a;

printf("Enter a character : ");

scanf("%c",&a);

if('A'<=a&&a<='Z')

printf("%c is an uppercase alphabet",a);

if(96<a&&a<123)

printf("%c is a lowercase alphabet",a);

if('0'<=a&&a<='9')

printf("%c is a digit",a);

if(a>=0&&a<48||a>57&&a<65||a>90&&a<97||a>122&&a<256)

printf("%c is a special character",a);

getch();

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.

Sol – 17.

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b,c;

printf("Enter the length of sides : ");

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

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

printf("It will be a triangle");

else

printf("It will not be a triangle",a);

getch();

return 0;

}

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

days in that month

Sol – 18.

#include<stdio.h>

#include<conio.h>

int main()

{

int a;

printf("Enter the number of month : ");

scanf("%d",&a);

if(a>12||a==0||a<0)

printf("Invalid month");

else

{

if(a==2)

printf("Number of days : 28");

else

{

if(a==4||a==6||a==9||a==11)

printf("Number of days : 30");

else

printf("Number of days : 31");

}

}

getch();

return 0;

}