***Assignment-3***

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

Ans-#include<stdio.h>

int main()

{

int a,re;

printf("enter a number: ");

scanf("%d",&a);

if(a>0)

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

else

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

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a;

printf("enter a number: ");

scanf("%d",&a);

if(a%5==0)

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

else

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

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a;

printf("enter a number: ");

scanf("%d",&a);

if(a%2==0)

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

else

printf("%d is an odd number",a);

return 0;

}

4. 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 a;

printf("enter a number: ");

scanf("%d",&a);

if((a/2)\*2==a)

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

else

printf("%d is an odd number",a);

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a,count=0,b;

printf("enter a number: ");

scanf("%d",&a);

b=a;

while(a>0)

{

count++;

a=a/10;

}

if(count==3)

printf("%d is a three digit number",b);

else

printf("%d is not a three digit number",b);

return 0;

}

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

the same.

Ans-#include<stdio.h>

int main()

{

int a,b;

printf("enter two number: ");

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

if(a>b)

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

else if(b>a)

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

else

printf("%d and %d are same ",a,b);

return 0;

}

7. 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 values of a,b,c: ");

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

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

if(D>0)

printf("roots are real & distinct");

else if(D==0)

printf("roots are real & equal");

else

printf("imaginary roots");

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int year;

printf("enter a year: ");

scanf("%d",&year);

if(year%100==0)

{

if(year%400==0)

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

else

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

}

else

{

if(year%4==0)

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

else

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

}

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.

Ans-#include<stdio.h>

int main()

{

int a,b,c;

printf("enter three numbers: ");

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

a>b?(a>c)?printf("%d is greatest",a):printf("%d is greatest",a):(b>c)?printf("%d is greatest",b):printf("%d is greatest",c);

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.

Ans-#include<stdio.h>

int main()

{

float cp,sp,a;

printf("enter cost price and selling price: ");

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

a=((sp-cp)/cp)\*100.0;

if(a>0)

printf("%f is the profit percentage",a);

else

printf("%f is the loss percentage",a);

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.

Ans-#include<stdio.h>

int main()

{

float a,b,c,d,e;

printf("enter 5 subjects marks please enter under 100: ");

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

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

printf("candidate passed");

else

printf("candidate failed");

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

char a;

printf("enter a alphabet: ");

scanf("%c",&a);

if(a>=65&&a<=90)

printf("%c is upper case",a);

else if(a>=97&&a<=122)

printf("%c is lower case",a);

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a;

printf("enter a number: ");

scanf("%d",&a);

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

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

else

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

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a;

printf("enter a number: ");

scanf("%d",&a);

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

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

else

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

return 0;

}

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

Ans-#include<stdio.h>

int main()

{

int a;

printf("enter a number: ");

scanf("%d",&a);

if(a>0)

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

else if(a==0)

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

else

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

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.

Ans-#include<stdio.h>

int main()

{

char a;

printf("enter a character: ");

scanf("%c",&a);

if(a>=65&&a<=90)

printf("%c is upper case",a);

else if(a>=97&&a<=122)

printf("%c is lower case",a);

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

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

else

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

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.

Ans-#include<stdio.h>

int main()

{

int a,b,c;

printf("enter three sides of triangle: ");

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

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

printf("triangle possible");

else

printf("triangle not possible");

return 0;

}

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

days in that month

Ans-#include<stdio.h>

int main()

{

int a,b,c;

printf("enter the month number: ");

scanf("%d",&a);

if(a<8)

{

if(a&1)

printf("31 days in that month");

else if(a==2)

printf("28 or 29 days in that month");

else

printf("30 days in that month");

}

else

{

if(a%2==0)

printf("31 days in that month");

else

printf("30 days in that month");

}

return 0;

}