 Computer File

Section :- AU(2) Roll no. : 60

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Q.1 WAP to store the name,customer id , amount, Products bought, Final amount to pay after discount.

Ans. #include<stdio.h>

int main(){

    int c\_id;

    float total\_unit, extra\_unit, c, c1=0, total;

    char name[10];

    printf("enter customer id : ");

    scanf("%d",&c\_id);

    printf("enter customer name : ");

    scanf("%s",&name);

    printf("enter the unit consumed : ");

    scanf("%f",&total\_unit);

    extra\_unit=total\_unit - 400;

    printf("customer IDNO : %d\n",c\_id);

    printf("customer name : %s\n",name);

    printf("unit consumed: %.2f\n",total\_unit);

    if(total\_unit>0 && total\_unit<=199)

    {

        c=total\_unit\*1.20;

        printf("Amount charge @Rs:1.20 per unit : %.2f\n",c);

    }

    if(total\_unit>=200 && total\_unit<400)

    {

        c=total\_unit\*1.50;

        printf("Amount charge @Rs:1.50 per unit : %.2f\n",c);

    }

    if(total\_unit>=400 && total\_unit<600)

    {

        c=total\_unit\*1.80;

        printf("Amount charge @Rs:1.80 per unit : %.2f\n",c);

            c1=total\_unit\*0.15;

            printf("Surcharge amount : %.2f\n",c1);

    }

    if(total\_unit>=600)

    {

        c=total\_unit\*2.00;

        printf("Amount charge @Rs:2.00 per unit : %.2f\n",c);

            c1=total\_unit\*0.15;

            printf("Surcharge amount : %.2f\n",c1);

    }

    total=c+c1;

    printf("Net amount pay by customer : %.2f\n",total);

    return 0;

}

Q.2 WAP to Check the size of datatypes by using inbuilt function.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    printf("size of short=%d bytes",sizeof(short));//size checking

        printf("\n size of long=%d bytes",sizeof(long));

            printf("\n size of int=%d bytes",sizeof(int));

            printf("\n size of float=%d bytes",sizeof(float));

            printf("\n size of double=%d bytes",sizeof(double));

            printf("\n size of char=%d bytes",sizeof(char));

            printf("\n size of short int =%d bytes",sizeof(short int));

return 0;

}

Q.3 WAP to print cube of a number.

Ans.

#include<stdio.h>

#include<math.h>

int main()

{

 int num=5; int cube=pow(num,3);//cube printing

printf("cube of number %d is %d",num,cube);

    return 0;

}

Q.4 WAP to print the perimeter of square and volume of cube using functions.

Ans. #include<stdio.h>

void cube();

void square();

void square()

{

int a,para;

printf("Enter the Side of Square\n");

scanf("%d",&a);

para=4\*a;

printf("The PERIMETER OF SQUARE IS : %d\n",para);

}

void cube()

{

int s;

printf("Enter the side of cube\n");

scanf("%d",&s)

int vol=s\*s\*s;

printf("Volume of Cube is %d\n",vol);

}

int main()

{

cube();

square();

}

Q.5 WAP to find the compound interest of a sum and Print it.

Ans. #include <stdio.h>

#include <math.h>

int main()

{

 int p=1000;//compound interest

 int r=5;

 int t=5;

 int n=2;

 float compound=p\*(pow((1+(r/(100\*n))),(n\*t)));

 printf("compound interest for principal %d,rate %d,time %d,n= %d is %.2f",p,r,t,n,compound);

 return 0;

}

Q.6 Write a program to find and print the area and perimeter of a square.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

float l,b,a,p;//area and perimeter

printf("please enter length and breath of the rectangle");

scanf("%f%f",&l,&b);

a=l\*b;

p=2\*(l+b);

printf("area of the rectangle is %f",a);

printf("\n perimeter of rectangle is %f",p);

return 0;

}

Q.7 WAP to swap two no.s given to you by the user.

Ans.

#include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,cont;//swapping 2 no.s

printf("please enter 2 no.'s u want to swap");

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

printf("before swapping a=%d and b=%d",a,b);

cont=a;

a=b;

b=cont;

printf("\n after swaping a=%d and b= %d",a,b);

return 0;

}

Q. 8 WAP to swap two no.s given to you by user without a container.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a,b;//swapping without container

printf("please enter two no. you want to swap");

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

printf("\n no.s before swapping are %d and %d",a,b);

a=a+b;

b=a-b;

a=a-b;

printf("\n no.s after swapping are %d and %d",a,b);

return 0;

}

Q.9 WAP To apply the concepts of operators through a c program.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,c,d,e,f,g;//operators

a=10;

b=++a;

c=b--;

c+=a;

d=--c;

d%=a;

e=++d;

f=e--;

g=++c;

g\*=e;

printf("final value of a is %d",a);

printf("\n final value of b is %d",b);

printf("\n final value of c is %d",c);

printf("\n final value of d is %d",d);

printf("\n final value of e is %d",e);

printf("\n final value of f is %d",f);

printf("\n final value of g is %d",g);

return 0;

}

Q.10 WAP to check whether the no. is even or odd ?

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a;//checking even and odd

    printf("write the no. you want to check");

    scanf("%d",&a);

    printf("the no is even if it returns 1 and if not it will return 0");

    printf("\n and the no. is returning %d",a%2==0);

return 0;

}

Q. 11 WAP to check the concept of ternary operartor.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,c;//ternary operator

    printf("write 2 no.s you want to check");

    scanf("%d%d",&a,&b);

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

return 0;

}

Q.12 WAP to check which no. is the lowest among all the numbers given to you by user.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,c;

    scanf("%d%d%d",&a,&b,&c);

    if(a<b&&b<c)

    {

        printf("%d is lowest",a);//lowest number

    }

    else if(b<c&&b<a)

    {

    printf("%d is lowest",b);

    }

    else

    {

    printf("%d is lowest",a);

    }

    return 0;

}

Q.13 WAP to check whether is divisible by 3 or 7 or by both. ??

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int n;//divisible by 3 and 7

    scanf("%d",&n);

    if(n%7==0&&n%3==0)

    {

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

    }

    else if(n%3==0)

    {

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

    }

        else if(n%7==0)

    {

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

    }

    else

    {

    printf("%d is neither divisible by 7 nor by 3",n);

    }

    return 0;

}

Q.14 WAP to find and print the average of three numbers and find & print the percentage (%) .

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

    int a,b,c,d,e; float avg,per;//average

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

    {

avg=(a+b+c+d+e)/5;

per=(avg\*100)/500;

printf("your average is %.2f",avg);

printf("your percenage is %.2f %%",per);

    return 0;

}

Q.15 WAP to take and print the elements of an 2D Array from the user .

Ans. #include<stdio.h>

int main()

{

int m,n;

printf("Enter the rows and columns of 2-D array");

scanf("%d%d",&m,&n);

int a[m][n];

printf("Enter the elements of matrixes");

for(int i=0;i<m;i++)

{

for(int j=0;j<n;j++)

{

scanf("%d",&a[i][j]);

}

}

for(int i=0;i<m;i++)

{

for(int j=0;j<n;j++)

{

printf("%d ",a[i][j]);

}

printf("\n");

}

}

Q.16 WAP to print the fibonnacci series upto an extend given to you by the user.

Ans. #include<stdio.h>

#include<conio.h>

int main()

{

int a=0,b=1,c,n;

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

printf("%d ",a);

c=a+b;

a=b;

b=c;

}

return 0;

}

Q.17 WAP to Check whether the number is an Armstrong number or not ??

Ans. #include<stdio.h>

#include<math.h>

int main()

{

int n;printf("Please enter the value you want to check");

scanf("%d",&n);

int count=0,temp=n,original=n,sum=0,r;

while(temp>0)

{

temp=temp/10;

count++;

}

while(n>0)

{

r=n%10;

sum=sum+pow(r,count);

n=n/10;

}

if(sum==original)

{

printf("%d is an armsrong no.",original);

}

else

{

printf("%d is not an armstrong no.",original);

}

return 0;

}

Q.18 WAP to Enter the elements in array and then check the average of all the elements of an array.

Ans. #include<stdio.h>

int main()

{

int sub,sum=0; float avg;

printf("please enter the subjects ");

scanf("%d",&sub);

int a[sub];

for(int i=0;i<sub;i++)

{printf("please enter %d subject marks",i);

scanf("%d",&a[i]);

}

for(int i=0;i<sub;i++)

{sum=sum+a[i];

}

printf("sum of marks is:%d",sum);

avg=(sum/sub);

printf("\naverage of marks is %.2f",avg);

}

Q.19 WAP to convert a binary number into decimal number.

Ans. #include<stdio.h>

int main()

{int n,r,b=0,base=1;

printf("enter a number");

scanf("%d",&n);

while(n>0)

{r=n%10;

b=b+r\*base;

n=n/10;

base=base\*2;

}

printf("decimal is: %d",b);

return 0;

}

Q.20 WAP to find and print the subtraction of 2 no.s without using (-) operator.

Ans. #include<stdio.h>

int main()

{int a,b,result;

printf("enter two no");

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

result=a+~b+1;

printf("your desired output is %d",result);

return 0;

}

Q.21 WAP to sort an array with the technique of bubble sort.

Ans. #include<stdio.h>

int main()

{

int n,temp;

printf("Enter the Size of Array");

scanf("%d",&n);

int a[n],p=0,o=0,pos=0,neg=0,zero=0;

for(int i=0;i<n;i++)

{

printf("ENTER THE ELEMENTS AT INDEX %d ",i);

scanf("%d",&a[i]);

}

for(int i=0;i<n-1;i++)

{

for(int j=0;j<n-1;j++)

{

if(a[j]>a[j+1])

{

temp=a[j];

a[j]=a[j+1];

a[j+1]=temp;

}

}

}

for(int i=0;i<n;i++)

{

printf("%d ",a[i]);

}

return 0;

}

Q.22 WAP to implement the concept of call by refrence.

Ans. #include<stdio.h>

int f(int \*a,int \*b)

{

int c=\*a+\*b;

return c;

}

int main()

{

int x,y;

printf("Enter the value of no. you want to add");

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

int \*m=&x,\*n=&y;

int l=f(m,n);

printf("Addition is %d",l);

}

Q.23 WAP to implement the concept of call by value .

Ans. #include<stdio.h>

void f(int a,int b)

{

a=10,b=20;

printf("inside function a=%d,b=%d",a,b);

}

int main()

{

int a=50,b=60;

f(a,b);

printf("outside fxn a=%d,b=%d",a,b);

}

Q.24 WAP to implement the concept of character sequence.

Ans. #include<stdio.h>

int main()

{

char ch,c='Z',i,j;

printf("Enter a character");

scanf("%c",&ch);

for(i='A';i<=ch;i++)

{

for(j='A';j<=ch;j++)

{

printf("%c \t",c);

c--;

}

printf("\n");

}

return 0;

}

Q.25 WAP to Check whether a square matrix is upper triangle, lower triangle or Diagonal matrix.

Ans. #include<stdio.h>

int main()

{

int m,n;

printf("Enter the rows and columns of Matrix");

scanf("%d%d",&m,&n);

int a[m][n];

printf("Enter the elements of matrix");

for(int i=0;i<m;i++)

{

for(int j=0;j<n;j++)

{

scanf("%d",&a[i][j]);

}

}

printf("Normal Matrix : \n");

for(int i=0;i<m;i++)

{

for(int j=0;j<n;j++)

{

printf("%3d ",a[i][j]);

}

printf("\n");

}

for(int i=0;i<m;i++)

{

for(int j=0;j<n;j++)

{

if(i==j)

{

if(a[i][j]!=0)

{

printf("Yes, Its a Diagonal Matrix\n");

break;

}

}

else if(j>i)

{

if(a[i][j]==0)

{

printf("Yes, Its a Upper Triangle Matrix\n");

break;

}

}

else if(i>j)

{

if(a[i][j]==0)

{

printf("Lower Triangle Matrix");

}

}

}

}

return 0;

}

-------------------THANK YOU-----------------