1. **Write a program to find out Armstrong numbers between 1 to 1000.**

= #include <stdio.h>

#include <math.h>

int main()

{

int num,onum,rem,n,anum;

for(int i=0;i<=1000;i++)

{

num=i;

onum=num;

n=0;

anum=0;

while(onum>0)

{

onum=onum/10;

n++;

}

onum=num;

while(onum>0)

{

rem=onum%10;

anum=anum+pow(rem,n);

onum=onum/10;

}

if(anum==num)

{

printf("%d\t",num);

}

}

return 0;

}

**Output:-**

1 2 3 4 5 6 7 8 9 153 370 371 487

1. **Write a program to take book details(title,author,edition& acc-no) of 10 book and display the result.**

= #include <stdio.h>

#include <string.h>

#include <ctype.h>

struct book

{

char title[30],author[30],edition[5],acc\_no[5];

};

int main()

{

struct book st[10];

int i;

char acc\_no[5];

for(i=0;i<1;i++)

{

printf("Enter the book title");

gets(st[i].title);

printf("Enter the author name");

gets(st[i].author);

printf("Enter the edition number");

gets(st[i].edition);

printf("Enter the accession number");

gets(st[i].acc\_no);

}

for(i=0;i<1;i++)

{

printf("Book title");

gets(st[i].title);

printf("Author name");

gets(st[i].author);

printf("Edition number");

gets(st[i].edition);

printf("Accession number");

gets(st[i].acc\_no);

}

printf("Enter the accession number");

gets(acc\_no);

for(i=0;i<1;i++)

{

if(strcmp(st[i].acc\_no,acc\_no)==0)

{

printf("Book title");

gets(st[i].title);

printf("Author name");

gets(st[i].author);

printf("Edition number");

gets(st[i].edition);

printf("Accession number");

gets(st[i].acc\_no);

}

}

return 0;

}

**Output:-**

Enter the book title: The silent witness

Enter the author name: Devdas

Enter the edition number: 1920

Enter the accession number:87

Book Title-The silent witness

Author name-Devdas

Edition number-1920

Accession number:87

1. **Give an array of numbers {3,5,7,9,5,11,7,13,11}. Write the program to compute the numbers of repetitions of each number on the series.**

= #include <iostream>

using namespace std;

int main()

{

int arr[]={3,5,7,9,5,11,7,13,11};

int n = size of(arr)/size of(arr[0]);

int k;

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

{

int count=0;

if(arr[i]!=-1)

{

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

{

if(arr[i]==arr[j])

{

count++;

}

}

count<<"Number"<<arr[i]<<"occurs"<<count<<"times\n";

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

{

if(arr[k]==arr[i])

{

arr[k]=-1;

}

}

}

}

return 0;

}

**Output:-**

Number 3 occurs 1 times

Number 5 occurs 2 times

Number 7 occurs 2 times

Number 9 occurs 1 times

Number 5 occurs 1 times

Number 11 occurs 2 times

Number 7 occurs 1 times

Number 13 occurs 1 times

Number 11 occurs 1 times

1. **A circle has center coordinate(3,2) & radius 5 unit take a point (h,k) on the coordinate system. Write a program to check the point is on the circle or inside or outside the circle.**

=#include<iostrem>

#include<c math>

using namespace std;

int main()

{

double h,k;

cout<< “Enter the coordinate of the point h”;

cin>>h;

Cout<< “Enter the coordinate of the point k”;

cin>>k;

float center x=3.2;

float center y=2.0;

float radius=5.0;

float distance = squrt (pow(h-center x,2)+pow(k-center y,2));

if(distance==radius)

{

cout<< “The point (“<<h<<”, “<<k<<”)is on the circle<<endl;

}

else if(distance>radius)

{

cout<< “The point (“<<h<<”, “<<k<<”)is inside the circle<<endl;

}

else

{

cout<< “The point (“<<h<<”, “<<k<<”)is outside the circle<<endl;

}

return 0;

}

**Output:-**

The point (3,2) is inside the circle.