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B.Tech II year I semester CSE(S2)

Course name : Object Oriented Programming through C++ lab

Week - 01 (07-08-2023) task

1. Write a C++ program to calculate prime numbers up to n.

C Program	C++ Program

#include <stdio.h>
int isPrime(int);
int main(){
  int n;
  printf("enter n value\n");
  scanf("%d",&n);
  for(int i=2;i<=n;i++){
  if(isPrime(i)==1)
  printf("%d\t",i);
  }
  return 0;
}
int isPrime(int n){
  int i;
  for(i=2;i<n;i++){
  if(n%i==0)
  return 0;
  }
  return 1;
}
	#include<iostream>
	using namespace std;
	bool isPrime(int);
	int main(){
	  int n;
	  cout<<"enter n value"<<endl;
	  cin>>n;
	  for(int i=2;i<=n;i++){
	  if(isPrime(i))
	  cout<<i<<" ";
	  }
	  return 0;
	}
	bool isPrime(int n){
	
	// **write your code here**
	
	}

2. Write a C++ Program to print the armstrong numbers upto 10000.

```
#include<iostream> // for cout and cin stream objects
#include<cmath>   // for mathematical functions like pow,floor,ceil etc.,
using namespace std;
bool isArmstrong(int);
int main(){
   int n,result;
   cout<<"enter n value"<<endl;
   cin>>n;
   for(int i=10;i<=n;i++){
         if(isArmstrong(i))
      cout<<i<<endl;
   }
   return 0;
}
bool isArmstrong(int n){
    // write your code here
}
```

3. Write a C++ program to check whether the array contains distinct elements or not.

```
#include<iostream>
using namespace std;
bool isArrayDistinct(int[],int);
int main(){
   int a[10],n;
   cout<<"Enter array size"<<endl;
   cin>>n;
   for(int i=0;i<n;i++)
      cin>>a[i];
   if(isArrayDistinct(a,n))
      cout<<"yes";
   else
      cout<<"no";
   return 0;
}
bool isArrayDistinct(int[],int){
  // write your code here
}
```

4. Write a C++ program to find the number of occurrences of a given element in an array.

```
#include<iostream>
using namespace std;
int findOccurrences(int[],int, int);
int main(){
   int a[10],n,ele;
   cout<<"Enter array size"<<endl;
   cin>>n;
   for(int i=0;i<n;i++)
      cin>>a[i];
   cout<<”Enter element to find the occurrences”<<endl;
   cin>>ele;
   int result=findOccurrences(a,n,ele);
   cout<<"the occurrences of element "<<ele << " in the given array is " << result<<endl;
   return 0;
}
int findOccurences(int[], int, int){
  // write your code here
}
```