

ASSIGNMENT - 2(240850320046)

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Question 1)

```
#include<iostream>
#include<cmath>
using namespace std;
int main(){
    int n ;
    cout<<"Enter the number :";
    cin>>n;
    bool checkPrime(n);
}
```

```
bool checkPrime(int n) {
    if (n <= 1) {
        return false;
    }
    if (n == 2) { // 2 is a prime number
        return true;
    }
    if (n % 2 == 0) { // Even number greater than 2 is not
prime
        return false;
    }
    // Check odd number1s from 3 up to sqrt(n)
    for (int i = 3; i <= sqrt(n); i += 2) {
        if (n % i == 0) {
            return false;
        }
    }
    return true;
}
```

```
}
```

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```

Question 2)

```
#include <iostream>
```

```
#include <cmath>
```

```
using namespace std;
```

```
bool checkPrime(int);
```

```
void generatePrime(int);
```

```
int main(){
```

```
    int n1;
```

```
        cout << "enter the number : " ;
```

```
        cin >> n1;
```

```
    generatePrime(n1);
```

```
}
```

```
void generatePrime(int n1){
```

```
    if(n1<2){
```

```
        cout<<"There are no prime numbers less than  
2"<<endl;
```

```
    }
```

```
    for(int i=2;i<=n1;i++){
```

```
        if(checkPrime(i)){
```

```
            cout<<i<<endl;
```

```
        }
```

```
    }
```

```
    cout<<endl;
```

```
}
```

```
bool checkPrime(int n) {  
    if (n <= 1) {  
        return false;  
    }  
    if (n == 2) { // 2 is a prime number  
        return true;  
    }  
    if (n % 2 == 0) { // Even number greater than 2 is not  
prime  
        return false;  
    }  
    // Check odd number1 s from 3 up to sqrt(n)  
    for (int i = 3; i <= sqrt(n); i += 2) {  
        if (n % i == 0) {  
            return false;  
        }  
    }  
    return true;  
}
```

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Question 3)

```
#include <iostream>  
using namespace std;
```

```
int main() {
```

```

int n;
cout<<"Enter the number : " ;
cin>>n;
for(int i=0;i<26;i++){
    char ch = 'A';
    for(int j=0;j<i;j++){
        cout<<ch++;
    }
    cout<<endl;
}
return 0;
}

```

```

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```

Question 4)

```

#include <iostream>
using namespace std;

int main() {
    int a,b,n;
    cout<<"Enter the number 1 :";
    cin>>a;
    cout<<"Enter the number 2:";
    cin>>b;
    while(true){
        cout<<"Enter the operation Number to
perform :"<<endl;
        cout<<"1. Addition"<<endl;
        cout<<"2. Subtraction"<<endl;
        cout<<"3. Multiplication"<<endl;
    }
}

```

```
cout<<"4. Division"<<endl;
cout<<"5. Exit the program"<<endl;
```

```
cout<<"Enter the number:";
cin>>n;
```

```
if(n==5){
    cout<<"Exiting the program"<<endl;
    break;
}
```

```
switch(n){
    case 1:
        cout<<"Result : "<< " "<<a+b<<endl;
        break;
    case 2:
        cout<<"Result : "<< " "<<a-b<<endl;
        break;
    case 3:
        cout<<"Result : "<< " "<<a*b<<endl;
        break;
    case 4:
        cout<<"Result : "<< " "<<a/b<<endl;
        break;
    default:
        cout<<"You have Entered the wrong choice"<<endl;
        break;
}
cout<<endl;
}
```

```
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```

Question 5)

```
#include <iostream>
using namespace std;
int main(){
    int n ;
    cout<<"Enter the number:";
    cin>>n;
    for(int i=1;i<=n;i++){
        int a = 1;
        for(int j=1;j<=i;j++){
            cout<<a++;
        }
        cout<<endl;
    }
}
```