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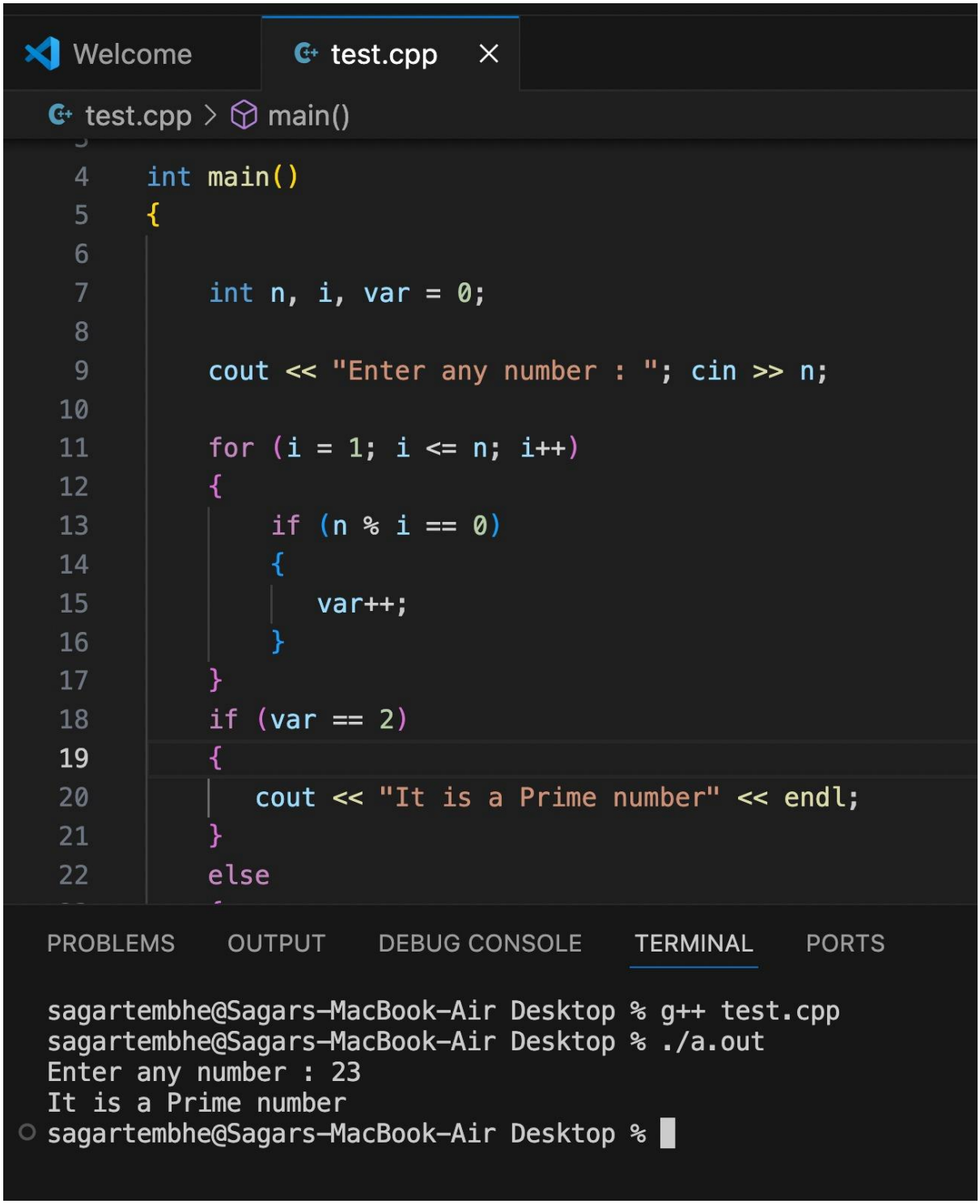
Roll No. - 12

Assignment 2

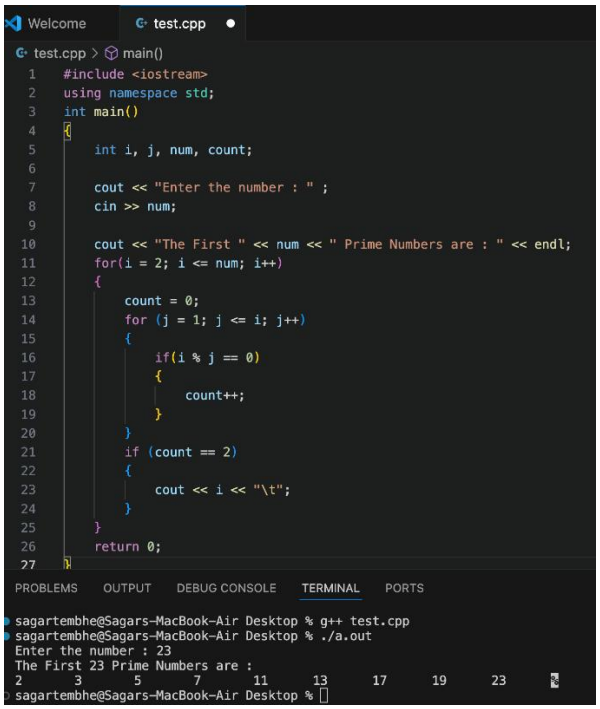
1. Write a program to check whether a number is prime or not.

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

int main()
{

   int n, i, var = 0;

   cout << "Enter any number : "; cin >> n;

   for (i = 1; i <= n; i++)
   {
      if (n % i == 0)
      {
        var++;
      }
   }
   if (var == 2)
   {
     cout << "It is a Prime number" << endl;
   }
   else
   {
       cout << "It is not a Prime number" << endl;
   }
   return 0;
}
```


Welcome
test.cpp
test.cpp > main()
4 int main()
5 {
6
7 int n, i, var = 0;
8
9 cout << "Enter any number : "; cin >> n;
10
11 for (i = 1; i <= n; i++)
12 {
13 if (n % i == 0)
14 {
15 var++;
16 }
17 }
18 if (var == 2)
19 {
20 cout << "It is a Prime number" << endl;
21 }
22 else
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
sagartembhe@Sagars-MacBook-Air Desktop % g++ test.cpp
sagartembhe@Sagars-MacBook-Air Desktop % ./a.out
Enter any number : 23
It is a Prime number
sagartembhe@Sagars-MacBook-Air Desktop %

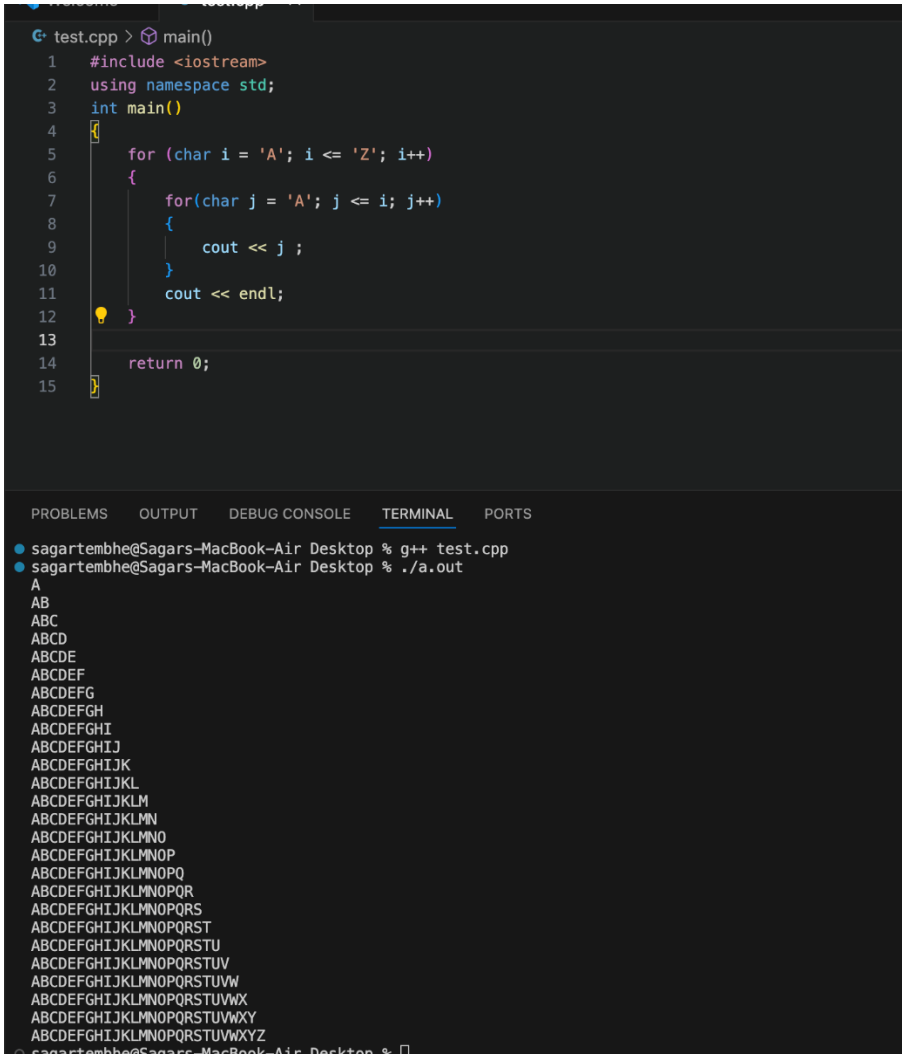
2. Write a program to generate first N prime numbers.
Accept N from user.

```
#include <iostream>
using namespace std;
int main()
{
   int i, j, num, count;

   cout << "Enter the number : " ;
   cin >> num;

   cout << "The First " << num << " Prime Numbers are : " << endl;
   for(i = 2; i <= num; i++)
   {
      count = 0;
      for (j = 1; j <= i; j++)
      {
         if(i % j == 0)
         {
            count++;
         }
      }
      if (count == 2)
      {
         cout << i << endl;

      }
   }

   return 0;
}
```



3. Write a program to generate following pyramid
A
AB
ABC
..... A.....Z

```
#include <iostream>
using namespace std;
int main()
{
   for (char i = 'A'; i <= 'Z'; i++)
   {
      for(char j = 'A'; j <= i; j++)
      {
         cout << j ;
      }
      cout << endl;
   }

   return 0;
}
```



4. Write a menu driven program to perform mathematical operations on two numbers.
1. Add
2. Sub
3. Mul
4. Div
5. Exitmenu :
accept the menu option and numbers form user.

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

int main() {
   int choice;
   float num1, num2;

   do {
      cout << "Menu:" << endl;
      cout << "1. Add" << endl;
      cout << "2. Subtract" << endl;
      cout << "3. Multiply" << endl;
      cout << "4. Divide" << endl;
      cout << "5. Exit" << endl;
      cout << "Enter your choice: ";
      cin >> choice;

      if (choice == 5) break;
      cout << "Enter two numbers: ";
      cin >> num1 >> num2;

      switch (choice) {
         case 1:
            cout << "Result: " << num1 + num2 << endl;
            break;
         case 2:
            cout << "Result: " << num1 - num2 << endl;
            break;
         case 3:
            cout << "Result: " << num1 * num2 << endl;
            break;
         case 4:
            if (num2 != 0)
               cout << "Result: " << num1 / num2 << endl;
            else
               cout << "Error! Division by zero." << endl;
            break;
         default:
            cout << "Invalid choice!" << endl;
      }
   } while (choice != 5);

   cout << "Exiting the program..." << endl;
   return 0;
}
```

```
Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Enter your choice: 1
Enter two numbers: 20
40
Result: 60
Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Enter your choice: 2
Enter two numbers: 70-30
Result: 100
Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Enter your choice: 3
Enter two numbers: 14
3
Result: 42
Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Enter your choice: 4
Enter two numbers: 200
10
Result: 20
Menu:
1. Add
2. Subtract
3. Multiply
4. Divide
5. Exit
Enter your choice:
```

5. Generate following pyramid , accept the level from the user as input
1
1 2
1 2 3
..... 1.....N
where N is the level accepted as input

```
#include <iostream>
using namespace std;
int main()
{
   int levels ;

   cout << "Enter the number of levels : " ;
   cin >> levels;

   for (int i = 1; i <= levels; i++)
   {
      for(int j = 1; j <= i; j++)
      {
         cout << j << " ";
      }
      cout << endl;
   }

   return 0;
}
```