

“Heaven’s Light is Our Guide”



Department of Computer Science & Engineering
RAJSHAHI UNIVERSITY OF ENGINEERING & TECHNOLOGY

Lab Report

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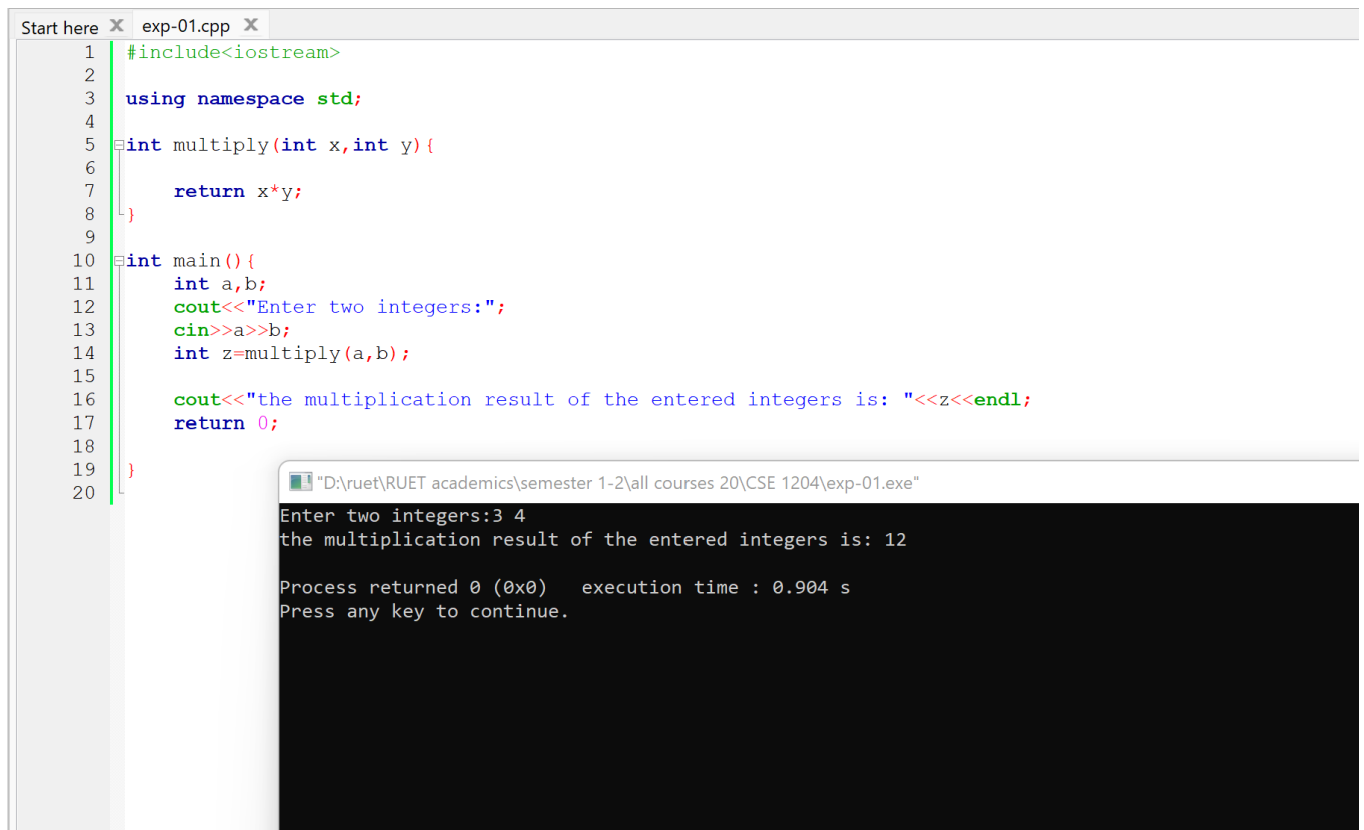
Submitted to:

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TASK-1: Write a code in c++ language and describe different sections of your code.

Solution:

A simple c++ program is given below:



The image shows a screenshot of a C++ program in a code editor and its execution output in a terminal window. The code editor window is titled 'exp-01.cpp' and contains the following code:

```
1 #include<iostream>
2
3 using namespace std;
4
5 int multiply(int x,int y){
6
7     return x*y;
8 }
9
10 int main(){
11     int a,b;
12     cout<<"Enter two integers:";
13     cin>>a>>b;
14     int z=multiply(a,b);
15
16     cout<<"the multiplication result of the entered integers is: "<<z<<endl;
17     return 0;
18 }
19
20
```

The terminal window shows the execution of the program. It prompts the user to enter two integers, and the user enters 3 and 4. The program then outputs the multiplication result, 12. The terminal window also shows the process return code (0) and execution time (0.904 s).

Description of the parts of the program:

1. Preprocessor Directive #include

As the name suggests, a *preprocessor* is a tool that runs before the actual compilation starts. Preprocessor directives are commands to the preprocessor and always start with a pound sign #. In Line 1 `#include<filename>` tells the preprocessor to take the contents of the file (`iostream`, in this case) and include them at the line where the directive is made. `iostream` is a standard header file that is included because it contains the definition of `std::cout` used in Line 12 that prints "Enter two integers" on the screen. In other words, the compiler was able to compile Line 12 that contains `std::cout` because we instructed the preprocessor to include the definition of `std::cout` in Line 1.

2.Namespace:

Namespace is a region that provides a scope to the identifiers. The **using namespace std** statement just means that in the scope it is present, make all the things under the `std` namespace available without having to prefix `std::` before each of them.

3.Functions:

Following the preprocessor directive(s) is the body of the program characterized by the function `main()` and other user built functions. The execution of a C++ program always starts in `int main()`. It is a standardized convention that function `main()` is declared with an `int` preceding it. `int` is the return value type of the function `main()`.

Similarly, in the code there is another function named "**multiply()**". The return type of the function is `int`. It takes two integer parameters `x` and `y` and returns the result of their multiplication.

4.int a,b: this line declares two variables `a` and `b` as integer variables.

5. cout<<"Enter two integers": this line orders to print the string "Enter two integers:" (without " " marks).

6. cin>>a>>b; This line takes the input of two integers and sets them as the values of a and b accordingly.

Note: "<<" after cout and ">>" after cin are overloaded operators that can handle all kinds of different arguments.

7. int z=multiply(a,b); This line declares another integer variable z and sets its value to be the returning value of the function multiply where the values of a and b are copied and used as the arguments of the function.

8. cout<<"the multiplication result of the entered integers is:"
"<<z<<endl; : This line indicates to first print the string "the multiplication result of the entered integers is: ".

9. return 0; This line indicates that the main function to return the value 0 and it's the end of the program.

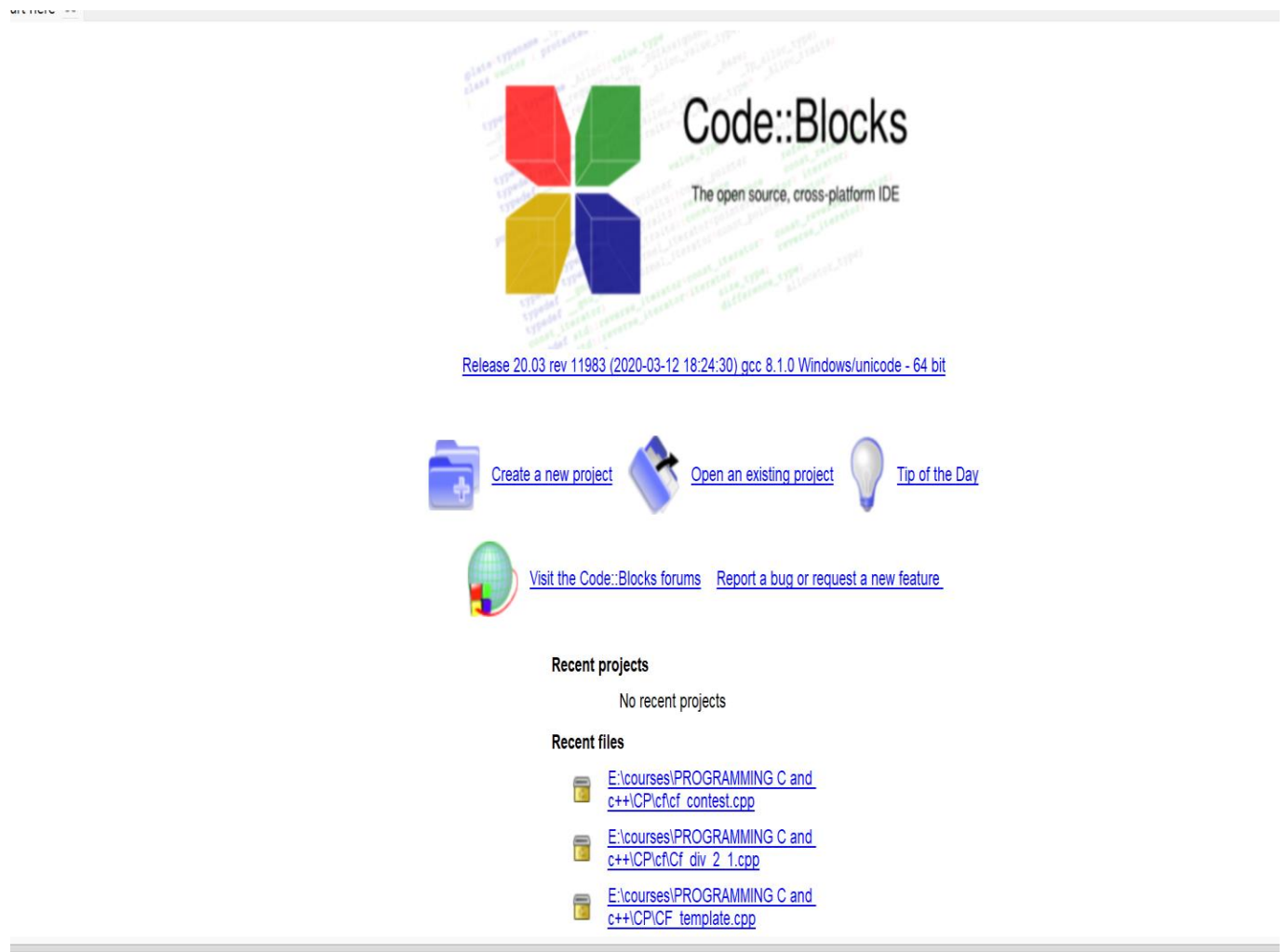
TASK-2: Discuss the steps for debugging.

Solution:

Steps for debugging using the ide codeblocks is as below:

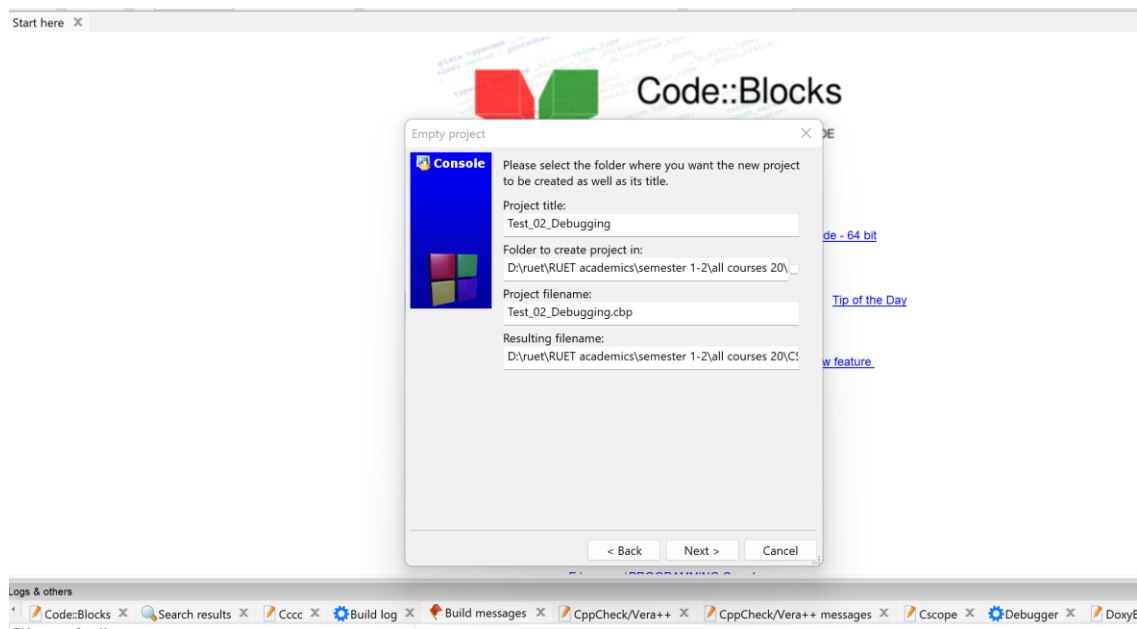
Step-1:open codeblocks from start button.

Step-2:Select Create new proect from the current window(starting window).

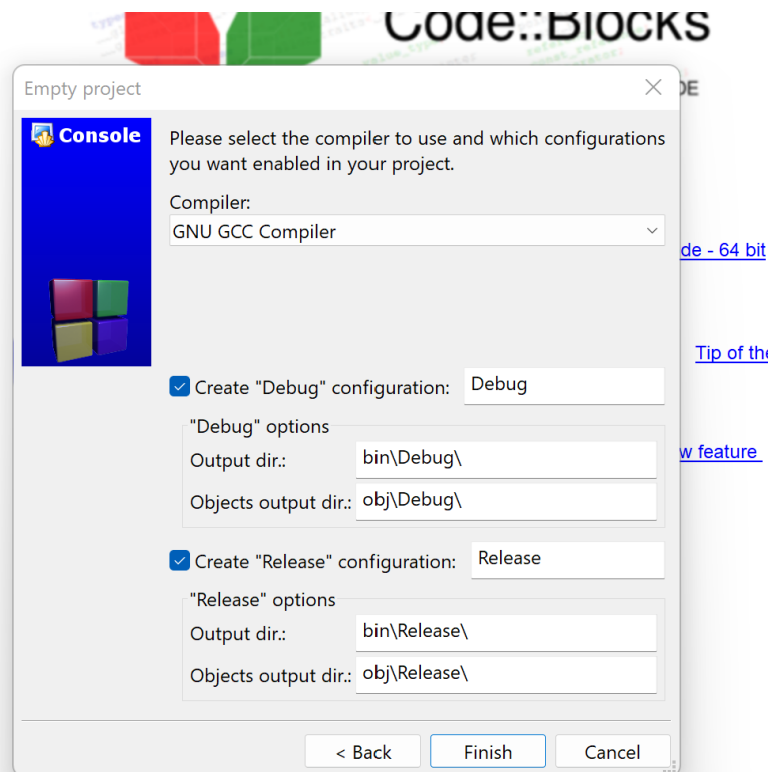


Step-3:Select “Empty project” and select “Go”(at the right navigation bar).Select “Next”.

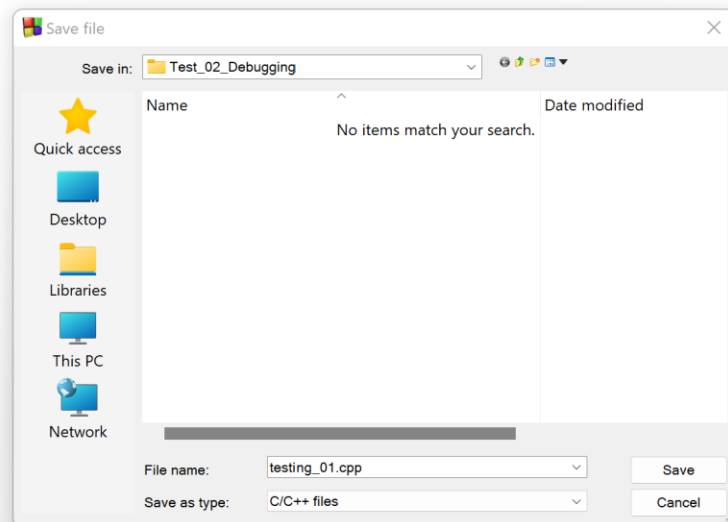
Step-4:Now in the new pop up window fill up the forms giving suitable project title,file location,filename.Press “Next”.



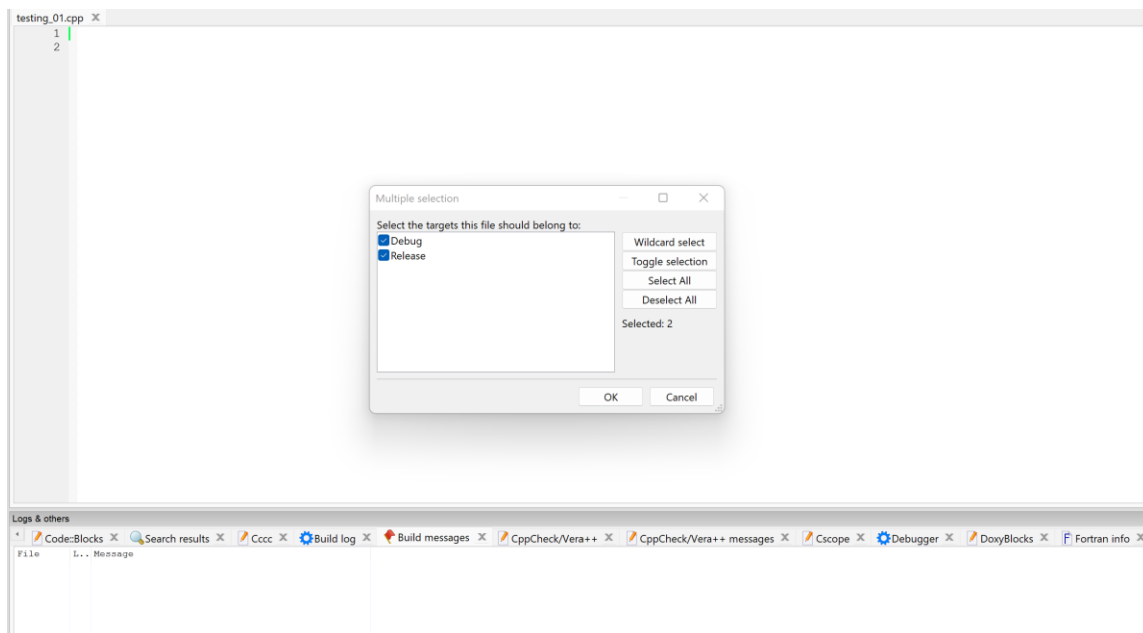
Step-5. Choose “GNU GCC compiler” and press “Finish”.



Step-6: Choose File -> New-> Empty file. Then in the popped up window select “Yes”. Finally save it in a folder.



Then This window will pop up:



Step-7:Check if the box debug is marked as checked and select “ok”.

Now the file is ready for writing a code and processing debugging operation.

TASK-03: Build a program for selecting bKash features from a list.

Solution: The program is as below:

```
Start here X exp-01-02.cpp X
1 #include<iostream>
2
3 using namespace std;
4
5 int main(){
6     cout<<"Dial *247# to access bKash features."<<endl;
7
8     string str;
9     int choice;
10    cin>>str;
11    if(str=="*247#"){
12        cout<<"Menu\n";
13        cout<<"1.Send money to bKash user\n2.Send money to non-bKash user\n3.Mobile recharge\n4.Payment\n5.Cash out\n6.Pay bill\n7.NGO payment\n8.Download bKash App\n9.My bKash\n10.Reset PIN no".
14        cout<<"Enter your choice: ";
15        cin>>choice;
16        switch(choice){
17            case 1:cout<<"Send money to bKash user"<<endl;break;
18            case 2:cout<<"Send money to non-bKash user"<<endl;break;
19            case 3:cout<<"Mobile recharge"<<endl;break;
20            case 4:cout<<"Payment"<<endl;break;
21            case 5:cout<<"Cash out"<<endl;break;
22            case 6:cout<<"Pay bill"<<endl;break;
23            case 7:cout<<"NGO payment"<<endl;break;
24            case 8:cout<<"Download bKash App"<<endl;break;
25            case 9:cout<<"My bKash"<<endl;break;
26            case 10:cout<<"Reset PIN no"<<endl;break;
27            default:cout<<"Enter a valid option"<<endl;
28        }
29    }
30    else{
31        cout<<"You,ve entered an invalid code"<<endl;
32    }
33
34
35
36    return 0;
37
38 }
39
```

```
"D:\ruet\RUET academics\semester 1-2\all courses 20\CSE 1204\exp-01-02.exe"
Dial *247# to access bKash features.
*247#
Menu
1.Send money to bKash user
2.Send money to non-bKash user
3.Mobile recharge
4.Payment
5.Cash out
6.Pay bill
7.NGO payment
8.Download bKash App
9.My bKash
10.Reset PIN no
Enter your choice: 6
Pay bill

Process returned 0 (0x0)   execution time : 11.890 s
Press any key to continue.
```

```
Logs & others
Code::Blocks Search results Cccc Build log Build message
F.. L.. Message
=== Build file: "no target" in "no project" (compiler: unknown) ===
=== Build finished: 0 error(s), 0 warning(s) (0 minute(s), 0 second(s))
```

