C/C++

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Summary

Building a C/C++ Program and the Compiler Steps

Building a c++ program is similar to c#, just that it involves one extra step which is compiling.
The steps I used in running the given “change calculator program”

1. Created a new program cpp file
2. Complied it using “clang++ program.cpp -l SplashKit -o program” command as I already had the globally installed splashkit.
3. I prepared the code in c# previously , I took help of the given resource and some extra text references to understand the syntax of c++ and converted the code into c++

The Main Function

I would start summarizing it with the basic syntax

```
int main() {
   // Program logic goes here
   return 0; // Optional return statement indicating successful termination
}
```

Where
int: Indicates the return type of the main function. It specifies whether the program completed successfully or encountered an error.
main(): The name of the function.
{}: The body of the main function, enclosed within curly braces
return 0;: An optional return statement at the end of the main function. This statement is used to indicate that the program terminated successfully.

To summarize
When we start organising code in this way, we need to indicate where the program starts. The main function forms the starting point for a C/C++ program. The code within the braces ({ ... }) is what runs when the program starts.

Reflection.

How do you know you have achieved the learning goals?

Compile and run C/C++ programs, including linking with external libraries.

I complied the c/c++ program using the command stated above and for now used just the splashkit libraries as they are easier to work with.

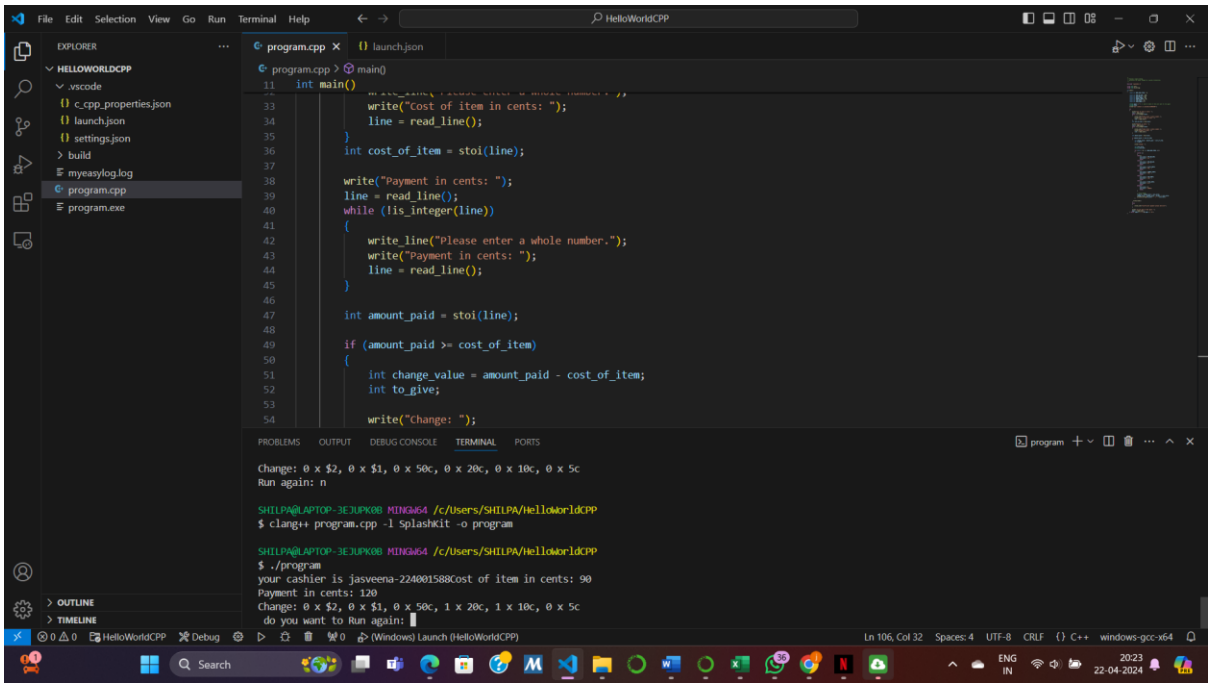
Code programs using C/C++ that involve sequence and data, and control flow.

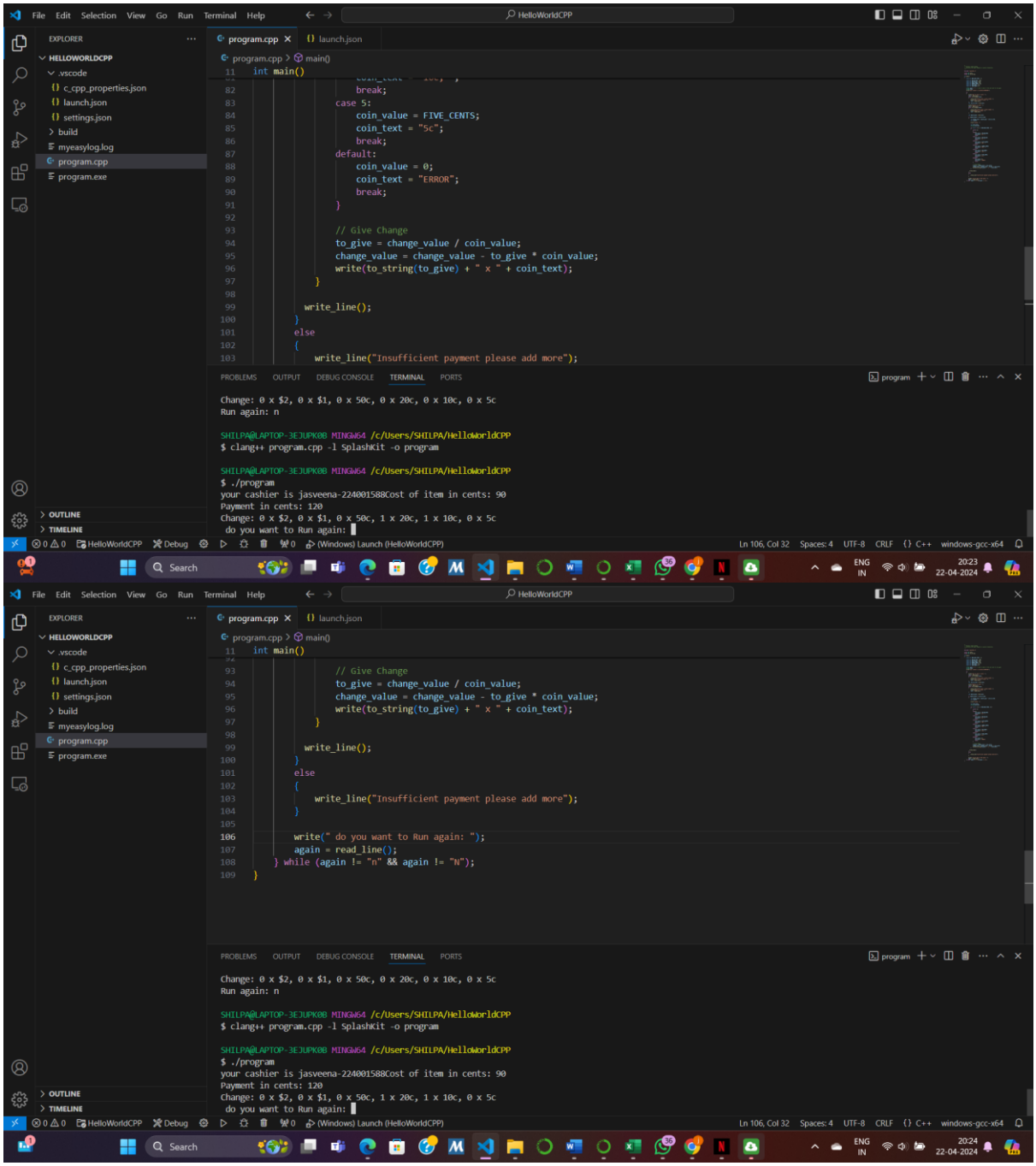
I converted the pre coded c# programs into c/c++. And yes they involved sequence and data and control flow

What is the most important thing you learned from this and why?

The most important thing is a new language I started to learn. I was not familiar with c/c++ at all and this task was the commencement of me engaging with a new language.

HERE ARE THE SCREENSHOTS OF THE CHANGE CALCULATOR PROGRAM CONVERTED TO C++




File Edit Selection View Go Run Terminal Help
HelloWorldCPP
EXPLORER
HELLOWORLDCPP
.vscode
c_cpp_properties.json
launch.json
settings.json
build
myeasylog.log
program.cpp
program.exe
program.cpp
launch.json
int main()
break;
case 5:
coin_value = FIVE_CENTS;
coin_text = "5c";
break;
default:
coin_value = 0;
coin_text = "ERROR";
break;
// Give Change
to_give = change_value / coin_value;
change_value = change_value - to_give * coin_value;
write(to_string(to_give) + " x " + coin_text);
write_line();
else
write_line("Insufficient payment please add more");
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Change: 0 x $2, 0 x $1, 0 x 50c, 0 x 20c, 0 x 10c, 0 x 5c
Run again: n
SHILPA@LAPTOP-3EJUPK0B MINGW64 /c/Users/SHILPA/HelloWorldCPP
$ clang++ program.cpp -l SplashKit -o program
SHILPA@LAPTOP-3EJUPK0B MINGW64 /c/Users/SHILPA/HelloWorldCPP
$ ./program
your cashier is jasveena-224001588Cost of item in cents: 90
Payment in cents: 120
Change: 0 x $2, 0 x $1, 0 x 50c, 1 x 20c, 1 x 10c, 0 x 5c
do you want to Run again:
OUTLINE
TIMELINE
Ln 106, Col 32 Spaces: 4 UTF-8 CRLF C++ windows-gcc-x64
Search
ENG IN
20:23 22-04-2024
write(" do you want to Run again: ");
again = read_line();
} while (again != "n" && again != "N");
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Learning Journey and Evidence

Capture how you progress through the activities here. This can include any notes, screenshots, code snippets, etc. Use this to show how you have achieved the learning outcomes.