# CMPSC 121: Project 4

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November 9, 2017

## 1 Instruction

Write a program (`nagivate.cpp`) that implements the following features:

1. Print out destination menu on screen. Use `navigate.cpp` you worked on for Project 1.
2. Get a menu choice (number) for the user from the keyboard. (use `cin`)
3. **Input validation:** Check the user menu choice is between 1 and 4. If not, display an error message that the input is invalid and get a menu choice again from the keyboard. Repeat this until the user correctly enters a number between 1 and 4. (Use `while` loop for repeating the steps.)
4. Determine the next destination (string) based on the user input. (use `if - else` or `switch - case`statement)
5. Print out the next destination on screen.

```
$ ./a.out
Please select your next destination:

1. New York
2. London
3. Cairo
4. Rio de Janeiro

Please enter your selection: 5

You entered a wrong number.
Please enter your selection: 0

You entered a wrong number.
Please enter your selection: 3

Your input is : 3
Your next destination is : Cairo
```

### 1.1 NOTES:

- **Due date:** by midnight (11:59pm) on March 20th (Thursday)

- You can start writing code using `navigate.cpp` for your Project 3.
- This time **indentation** becomes very important since you will use multiple `if - else - if - else` statements. Be sure to (i) match the indentation level for `if` and the corresponding `else`. And be sure to use curly braces for marking `if` block and `else` block.
- For this project, particular style elements of importance are:
  - Indentations for `while` loop and `if - else` statements
  - Meaningful variable naming. Use naming such as `userInput`, `destination` instead of `i` or `number`.
  - Put comments whenever needed.
- (Optional) You can use the following template code for your work.

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

int main()
{
    /* declare variables */
    int menu = 0;
    string destination = "";

    /* print destination lists and get user input */

    cout << "Please select your next destination:" << endl;
    cout << endl;

    cout << "1. New York" << endl;
    cout << "2. London" << endl;
    cout << "3. Cairo" << endl;
    cout << "4. Rio de Janeiro" << endl;
    cout << endl;

    /* TODO modify the input code to repeat inputs when the input is not
       between 1-4 */



    /* Store the corresponding city name to menu input
       in destination varaible */



    /* print out the menu and destination */



    return 0;
}
```

## 1.2 Technical notes:

If you use Visual Studio:

- Create a Visual Studio project with the name `Destination`. You can use a different name but *make sure* that the name follows the coding style. Avoid using default names such as `ConsoleApplication` or `Source.cpp`.
- In case you have problem with saving (i.e. read-only filesystem error as was with some Lab computers in class), move your project folder to `Desktop` folder.
- Click on '`Start without debugging`' menu item under `Build` menu to avoid window closing instantly when you run the compiled binary.
- **Submission:** After you are done, zip the project folder (or `nagivate.cpp` file) and upload the zip file on the Angel dropbox.

If you use Linux:

- `g++` compiler does not have any Project-like environment similar to Visual Studio's. You need to create a directory and create your source code file in the directory. Some Linux commands are:
  - Create a directory: `mkdir Destination`
  - Change to a directory: `cd Destination`
  - Edit `nagivate.cpp` file: `nano nagivate.cpp`
  - Compilation: `g++ nagivate.cpp`
  - Execution of the compiled binary: `./a.out`
- I recommend the use of MobaXTerm over Secure Shell Chrome app since MobaXTerm has a secure file transfer (sFTP) feature avaialble. If you use lab computers, download "portable" version of MobaXTerm since you can install it on lab computers without administrator's privilege.
- **Submission:** After you are done, download the `nagivate.cpp` file to your own computer using MobaXTerm. Then zip the file up and upload to the Angel dropbox.