



1. Control Structures: if, if-else, if-else-if, switch.

Create a new program using the following code:

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

//Authors:
//Date:
//Please enter the program description here:
//
//

//Function Prototypes
char getOption();
void showMenu();

//main function
int main()
{
    char chrOption;

    showMenu();
    chrOption = getOption();
    cout << "Option: " << chrOption << endl; // <- You can delet these line

    //Insert your code here to complete the program
    //According to the selected option. Use a switch structure
    //Remember to include cases for incorrect options

}

//*****
//function implementations

// This function ask the user for an option, reads a char and return it.
char getOption()
{
    char chrOption;
    cout << "Please enter your option: ";
    cin >> chrOption;
    return chrOption;
}

//This function shows a menu for the user.
void showMenu()
{
    cout << "\n***** MENU *****\n";
    cout << "Please select the appropriate option:\n";
    cout << "A. Run Water Bill program.\n";
    cout << "Q. Quit the main program.\n";
    cout << "*****\n";
}
```

Complete the program included in the main.cpp file as follows:

1. Using a switch structure, make sure the program behave as desired according to the selected user option from the menu. Remember to include a case to be used when the user selects an invalid option.
2. Implements the option **Program WaterBill** according to the following instructions. Remember to use the appropriate data types:

*Write the instructions that prompt the user for their quarterly water bill for the last four quarters. The program should find and output their average **monthly** water bill.*

If the average bill exceeds \$75, the output should include a message indicating that too much water is being used.

If the average bill is at least \$25 but no more than \$75, the output should indicate that a typical amount of water is being used.

Finally, if the average bill is less than \$25, the output should contain a message praising the user for conserving water.

Use the sample run of the function below as a model for your output.

Sample Run 1:

```
***** MENU *****
Please select the appropriate option:
A. Run Water Bill program.
Q. Quit the main program.
*****
Please enter your option:
a

Please input your water bill for quarter 1:
300
Please input your water bill for quarter 2:
200
Please input your water bill for quarter 3:
225
Please input your water bill for quarter 4:
275
Your average monthly bill is $83.33. You are using excessive amounts of water
```

Sample Run 2:

```
***** MENU *****
Please select the appropriate option:
A. Run Water Bill program.
Q. Quit the main program.
*****
Please enter your option:
b

Please input your water bill for quarter 1:
100
Please input your water bill for quarter 2:
150
Please input your water bill for quarter 3:
75
Please input your water bill for quarter 4:
125
Your average monthly bill is $37.50. You are using a typical amount of water
```

Sample Run 3:

```
***** MENU *****
Please select the appropriate option:
A. Run Water Bill program.
Q. Quit the main program.
*****
Please enter your option:
Q
Program Terminated
```

Sample Run 4:

```
***** MENU *****
Please select the appropriate option:
A. Run Water Bill program.
Q. Quit the main program.
*****
Please enter your option:
x
Invalid Option
```