

Bartosz_Galantowicz_1700994_ Software_Development_Test

by Bartosz Galantowicz

FILE	2275_BARTOSZ_GALANTOWICZ_BARTOSZ_GALANTOWICZ_1700994_ SOFTWARE_DEVELOPMENT_TEST_183215_2036700276.TXT (5.86K)		
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```
//Bartosz Galantowicz - 1700994
```

```
//Mike
```

```
//Exercise 2 - paste code below
```

```
void PromptExerciseTwo()
{
    cout << "Calculate the surface area of the sphere." << endl;
    double sphereArea{ 0 };  1
    sphereArea = CalculatingTheSurfaceAreaOfSphere();  2
    cout << "The surface area of the sphere is " << sphereArea << endl;
}
```

```
//Exercise 3 - paste code below
```

```
void PromptExerciseThree()
{
    double temperaturesInCelsius[5];

    cout << "Enter 5 temperatures in Celsius: " << endl;

    // getting input from the user for each temperature
    for (int i{ 0 }; i < 5; i++)
```

```
{  
    cout << i + 1 << ".";  
  
    temperaturesInCelsius[i] = ReadNumber("");  
  
    cout << endl;  
}  
  
cout << "Your entered temperatures are: " << endl;  
  
// printing entered values  
for (int i{ 0 }; i < 5; i++)  
{  
    cout << i + 1 << ".";  
  
    cout << temperaturesInCelsius[i] << " C";  
  
    cout << endl;  
}  
  
cout << "Your entered temperatures in Fahrenheit: " << endl;  
double temperaturesInFahrenheit[5];
```

```

// converting temperatures in Celsius into temperatures in Fahrenheit
for (int i{ 0 }; i < 5; i++)
{
    cout << i + 1 << ".";

    temperaturesInFahrenheit[i] =
ConvertingCelsiusIntoFahrenheit(temperaturesInCelsius[i]);

    cout << temperaturesInFahrenheit[i] << " F";

    cout << endl;
}
}

```

//Exercise 4 - paste code below

```

void PromptExerciseFour()
{
    string names[8];

    cout << "Enter 8 names: " << endl;
}

```

```
// getting 8 names from the user and storing them into the array
for (int i{ 0 }; i < 8; i++)
{
    cout << i + 1 << ".";

    names[i] = ReadText();

    cout << endl;
}

cout << "Now, you can check that a name is on your list." << endl;
cout << "Enter the name you want to find: ";

// providing a name to check that it was previously entered
string searchName{ "" };

searchName = ReadText();
bool isFound{ false };

for (int i{ 0 }; i < 8; i++)
{
    if (searchName == names[i])
    {
```

```
        // if the name is reapedted then break the loop
        isFound = true;
        break;
    }
}

// printing the result of the searching
if (isFound == true)
{
    cout << "Found it!";
}
else
{
    cout << "Failed to find it!";
}
}
```

THE FULL CODE:

```
#include<iostream>
```

```
#include<sstream>

#include<string>


using namespace std;


// functions

void PromptExerciseTwo();

double ReadNumber(string prompt);

double CalculatingTheSurfaceAreaOfSphere();


void PromptExerciseThree();

double ConvertingCelsiusIntoFahrenheit(double temperatureInCelsius);


void PromptExerciseFour();

string ReadText();


const double pi{ 3.142 }; // constant value for pi


int main(int argc, char *argv[])
{
    // Exercise 2

    PromptExerciseTwo();
```

```
        cout <<
        "=====
    << endl;
```

```
        // Exercise 3
```

```
        PromptExerciseThree();
```

```
        cout <<
        "=====
    << endl;
```

```
        // Exercise 4
```

```
        PromptExerciseFour();
```

```
        return 0;
```

```
    }
```

```
    // Exercise 4
```

```
    void PromptExerciseFour()
```

```
    {
```

```
        string names[8];
```

```
cout << "Enter 8 names: " << endl;
```

```
// getting 8 names from the user and storing them into the array
```

```
for (int i{ 0 }; i < 8; i++)
```

```
{
```

```
    cout << i + 1 << " ";
```

```
    names[i] = ReadText();
```

```
    cout << endl;
```

```
}
```

```
cout << "Now, you can check that a name is on your list." << endl;
```

```
cout << "Enter the name you want to find: ";
```

```
// providing a name to check that it was previously entered
```

```
string searchName{ "" };
```

```
searchName = ReadText();
```

```
bool isFound{ false };
```

```
for (int i{ 0 }; i < 8; i++)
```

```
{
```

```
        if (searchName == names[i])
        {
            // if the name is repeated then break the loop
            isFound = true;
            break;
        }
    }

    // printing the result of the searching
    if (isFound == true)
    {
        cout << "Found it!";
    }
    else
    {
        cout << "Failed to find it!";
    }
}

string ReadText()
{
    string input{ "" };
}
```

```
        cin >> input;

        return input;
    }

// Exercise 3

void PromptExerciseThree()
{
    double temperaturesInCelsius[5];

    cout << "Enter 5 temperatures in Celsius: " << endl;

    // getting input from the user for each temperature
    for (int i{ 0 }; i < 5; i++)
    {
        cout << i + 1 << ". ";

        temperaturesInCelsius[i] = ReadNumber("");

        cout << endl;
    }
}
```

```
cout << "Your entered temperatures are: " << endl;
```

```
// printing entered values
```

```
for (int i{ 0 }; i < 5; i++)
```

```
{
```

```
    cout << i + 1 << ".";
```

```
    cout << temperaturesInCelsius[i] << " C";
```

```
    cout << endl;
```

```
}
```

```
cout << "Your entered temperatures in Fahrenheit: " << endl;
```

```
double temperaturesInFahrenheit[5];
```

```
// converting temperatures in Celsius into temperatures in Fahrenheit
```

```
for (int i{ 0 }; i < 5; i++)
```

```
{
```

```
    cout << i + 1 << ".";
```

```
    temperaturesInFahrenheit[i] =
```

```
    ConvertingCelsiusIntoFahrenheit(temperaturesInCelsius[i]);
```

```

        cout << temperaturesInFahrenheit[i] << " F";

        cout << endl;
    }
}

double ConvertingCelsiusIntoFahrenheit(double temperatureInCelsius)
{
    double temperatureInFahrenheit{ 0 };
    temperatureInFahrenheit = (temperatureInCelsius * (9 / 5)) + 32;

    return temperatureInFahrenheit;
}

// Exercise 2
void PromptExerciseTwo()
{
    cout << "Calculate the surface area of the sphere." << endl;
    double sphereArea{ 0 };
    sphereArea = CalculatingTheSurfaceAreaOfSphere();
    cout << "The surface area of the sphere is " << sphereArea << endl;
}

```

```
double CalculatingTheSurfaceAreaOfSphere()
{
    double radius{ 0 };
    radius = ReadNumber("Enter the measurement for the radius: ");
    double sphereArea{ 0 };
    sphereArea = (4 * pi)*(radius*radius);

    return sphereArea;
}

// reading valid values from the user
double ReadNumber(string prompt)
{
    string input{ "" };
    stringstream stream;
    int number;

    cout << prompt;
    getline(cin, input);
    stream.str(input);

    while ((stream >> number && stream.eof()) == false)
    {
```

```
        cout << "Invalid value! Enter the value again:";

        getline(cin, input);

        stream.str(input);

        stream.clear();

    }

    stream >> number;

    return number;

}
```

FINAL GRADE

90/100

GENERAL COMMENTS

Instructor

Exercise 1: 17.5

Exercise 2: 9.5

Exercise 3: 13

Exercise 4: 14

See code for comments.

Some of the code could have been subdivided more cleanly and I would like to have seen more comments in the code.

PAGE 1



Comment 1

Just use sphereArea = 0 is is much clearer



Comment 2

You confused me for a while, but I found the function at the bottom of the file

It would be better if you entered the radius first, this function is doing two things

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14
