Compile and Run C++ Code

Pizza Calculator

Have you realized that sometimes pizza is more expensive when you buy the bigger one? In many restaurants, it is more reasonable to buy two medium pizzas than one large pizza. We want to get rid of this problem by computing the quotient of area to money. Let us find the cheapest pizza in town! (Long-term goal)

Hint: Consider that the cheapest pizza might not always be the best choice!

1. Create a new project called *pizzaCalculator*. Create a folder and a file.
2. Add a variable for `pi = 3.14159`. Use an appropriate datatype (now and for all other upcoming variables).
3. Add variables for the pizza sizes given by radius (`s,m,l`).
4. Add variables for the area which are computed using the pizza sizes, e.g. `sArea = s*s*pi`.
5. Add variables for pizza prices (`sPrice, …`).
6. Add variables for area per price (`sAreaPerPrice, …`).
7. Compare the values using if-statements. Write a message using std::cout telling which the cheapest pizza is, e.g. write the following to print the price of the small pizza:

```
std::cout << "Price: " << sPrice << std::endl;
```

8. Test your code. Look up your favorite pizza restaurant for prices and sizes.
9. You may realize that you have quite a lot of variables now. Clean up by defining a pizza-struct, which contains variables for area, price and area per price.
10. Imagine you are about to buy pizza for everyone. It is reasonable to know the price for several pizzas. Print out the price of the cheapest pizza for up to 10 pizzas using a for-loop. The output should be something like:

```
1 pizza = …
2 pizzas = …
…
10 pizzas = …
```

Fibonacci

Write a program that computes the Fibonacci sequence. The user may specify an argument that tells you how many elements of the sequence should be computed, i.e. for a call like

```
./fibonacci.out 5
```

The first 5 numbers of the Fibonacci sequence should be shown:

```
0 1 1 2 3
```

If the user does not give specify the length of the sequence, print the first 10 numbers.