

Complete the following functions with the given declarations. All user input and output **must** occur in your `main` function. You are permitted to create other functions if you feel they would help you complete the task. Call your C++ file `Conversions`. This is to be submitted to Classroom by the date on the assignment. You are only completing one file for this mini-project.

In your `main` function, you are going to be invoking the following functions. Obtain test values from the user through the `cin` command. Your program must contain enough input to properly invoke the following functions. The declarations are below:

```
string toBase(int decimal, int base)
```

Converts the argument integer from base 10 to the argument base (`base <= 9`).

```
string toBase16(int decimal)
```

Converts the argument integer from base 10 to base 16.

```
int toInteger(string number, int base)
```

Converts the argument string from the argument base to base 10 (`base <= 9`).

```
int toInteger16(string number)
```

Converts the argument string from base 16 to base 10.

This project will be graded on:

1. Documentation (4 points): Your code must be fully commented and employ standard C++-style conventions.
2. User-Friendliness (4 points): All interactions with the user must be clear and unambiguous.
3. Functions (16 points): Each function has the proper declaration and works as expected.

TOTAL: 24 points