

CS 111

writing functions

Model for function

A function is coded with the following model:

```
TITLE LINE {  
    BLOCK OF C++ CODE  
}
```

Example:

```
double square(double num){  
    return num * num;  
}
```

Model for title line

- ANSWER_TYPE FUNCTION_NAME(PARAMETER_LIST)
 - The parameter list is a comma separated list giving the parameters (input data)
 - Each parameter is specified by a variable declaration with its type and the name that will be used for it in the block
- Examples:
 - int max(int a, int b)
 - char firstLetter(string name)
 - bool coPrime(int x, int y)

Example 1

```
string fullName(string firstName, string lastName){  
    string answer = firstName + " " + lastName;  
    return answer;  
}
```

```
int main(){  
    string first = "John", last = "Doe";  
    OBTAIN THE FULL NAME  
    cout << "Full name: " << full << endl;  
    return 0;  
}
```

Example 2

```
int main(){  
    string name = "John";  
    char initial = 'Q';  
    int age = 20;  
    double rating = doSomething(name, initial, name, age, age + 10);  
    cout << rating << endl;  
    return 0;  
}
```

Creating title lines

1. What type of answer does it calculate?
2. How many parameters does it use?
3. What are the types of those parameters?

```
int main(){
    bool b=true; int i=1; double d=0; string s=""; char c='1';
    cout << function(function(b, s, c), "Hello", c) << endl;
    return 0;
}
```