

Exercise 12: Static Members

Due Date:

- **MW class:** **Wednesday, October 21**, at the beginning of class.
- **TTh class:** **Thursday, October 22**, at the beginning of class.

Turn in:

- Your **project** named **A250_E13_YourLastName_YourFirstName**
- A **printed** copy of the **HotDogStand.cpp** file (make sure the name header is in this file).

You may work on this exercise with another student. If you do, write **both names in the header**, turn in **two copies** of the **project**, one with your name on the folder and the other with the other student's name on the folder, and **only one copy** of the **printed cpp file**.

You have won some lottery money and you have decided to start a new business. You buy three hot dog stands and locate them around your area. After a couple of weeks, you notice that your business is booming, so you decide to create an application to keep track of the sales throughout the day. You set up each stand to send information to your application every time a hot dog is sold, and you implement your application to immediately calculate the total sales. One of the classes need to complete your application is the **HotDogStand**. The class creates objects representing each hot dog stand and keeps track of the sales.

Using the file **ex_13_static_members**, write the definition and implementation of the class **HotDogStand** as follows:

- **Member variables**
 - An integer **numSold** that stores the number of hot dogs sold by the stand
 - An integer **id** that stores the ID number of the stand
 - A **static** integer that keeps track of the total amount of hot dog sold by all the stands
- **Default constructor**
- **Function setID**
 - Passes an integer storing an ID to set the ID of the stand.
- **Function getID**
 - Returns the ID of the stand.
- **Function getStandSales**
 - Returns the total number of hot dogs by the stand.
- **Function justSold**
 - Increments the variable **numSold** every time a hot dog is sold.
- **Function getAllSales**
 - This is a **static** function
 - Returns the total number of hot dogs sold by all stands.
- **Destructor**

The project already contains **testing cases**. You will need to understand what the testing cases are doing to figure out the output.