

**Lab 06: Basic Types**

**CSE 4108**

**Structured Programming I Lab**

October 2022

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**Lab Tasks**

1. **Look at the sizeof that thing!:**

Write a program that prints the values of sizeof(int), sizeof(short), sizeof(long), sizeof(long long), sizeof(float), sizeof(double), and sizeof(long double).

2. **Scrabbler**:

In the Scrabble Crossword Game, players form words using small tiles, each containing a letter and a face value. The face value varies from one letter to another, based on the letter’s rarity.

The face values are:

**1: AEILNORSTU, 2: DG, 3: BCMP, 4: FHVWY, 5: K, 8: JX, 10: QZ.**

Write a program that computes the value of a word by summing the values of its letters.

Sample run:

**Enter a word: pitfall**

**Scrabble value: 12**

Your program should allow any mixture of lower-case and upper-case letters in the word.

3. **Plus-Signed Fractions - The Sign Of Four:**

In **Lab 2 - Formatted Input/Output** (Signed fraction problem), you were asked to write a program that added two fractions entered by the user. Modify the program so that the user may add, subtract, multiply, or divide two fractions (by entering either **+, -, \*,** or **/** between the fractions).

4. **Vowels rush:**

Write a program that counts the number of vowels (a, e, i, o, and u) in a sentence.

Sample run:

**Enter a sentence: I think therefore I am.**

**Your sentence contains 8 vowels.**