

Titans Invitation 2024 Novice Problem Set

1) Capitals

Write a program, that knows the capital city of each province and territory in Canada. When a judge enters a province or territory, your program should state the capital of that province.

Sample Input	Sample Output
Ontario	Toronto
Alberta	Edmonton

Note, in Canada the capitals are:

Alberta – Edmonton, British Columbia – Victoria, Manitoba – Winnipeg, New Brunswick – Fredericton, Newfoundland and Labrador - St. John's, Nova Scotia – Halifax, Ontario – Toronto, Prince Edward Island – Charlottetown, Quebec - Quebec City, Saskatchewan – Regina, Northwest Territories – Yellowknife, Nunavut – Iqaluit, Yukon – Whitehorse

2) How many a's?

Write a program that asks the user to enter a sentence the counts the number of a's (including capital A's) in the sentence.

Sample Input	Sample Output
Aaron ate apples	4

3) How old are you?

Write a program that asks the user to enter their birthday (day, month and year) and then tells them their age in years.

Sample Input	Sample Output
25 February 1975	49

4) Prime time

Write a program that asks the user to enter a number from 1 to 100 and prints out all of the prime factors of that number.

Sample Input	Sample Output
9	3,3
12	2,2,3
78	2,3,13

5) X-Words

Write a program that asks the user to enter a word then draws an X using the letters of that word

Sample Input	Sample Output
Ontario	<pre> O O n n t t a r r i i o o </pre>

6) []-Words

Write a program that asks the user to enter a word then draws a square using the letters of that word in a clockwise circle as long as the word starts and ends with the same letter. If it does not, your program should ask them to enter another word.

Sample Input	Sample Output
Manitoba	Please enter a word that starts and ends with the same letter.
Ontario	<pre> ONTARIO I N R T A A T R N I OIRATNO </pre>