

Lab 9: Collections

Exercise 1: Create a Project

1. Create a project called “lab9”
 - a) If you are using Eclipse create a project in Eclipse as we did in previous weeks.
 - b) If you are using text editor, create a “lab9” directory in “java” directory which is in your home directory.
2. Download the TestConverter.java from Piazza and put it under demo package in your project. Note that the class has compile-time errors.

Exercise 2: Declare and implement the class

NumberToTextConverter

1. Create a class named NumberToTextConverter in convert package.
2. Declare and initialize variable “Map<Integer, String> map” to hold predefined mappings.
3. Declare and implement method “public void addConversion(int number, String str)” to put predefined conversions into the map
4. Create and implement method “public String convert(int number)” to return String representation of given numbers. Implement this method incrementally.
 - a) In the first version, just handle the numbers which are already in the map
 - b) In the second version, modify your code to handle all the numbers less than 100
 - c) In the third version, modify the your code to handle all the numbers less than 1000
 - d) In the third version, modify the your code to handle all the numbers less than 1000000
 - e) In the final version, modify the your code to handle all the numbers less than 1000000000

Exercise 3: Declare and implement a method which converts given text to number

In this exercise you are to design and implement a method “public int convert(String text)” which converts the string representation of a number to its number format. For example the string “One Hundred Twenty Three Million Four Hundred Fifty Six Thousand Seven Hundred Eighty Nine” will be converted to “123456789”.