**Online Lab 10**

**Object Oriented Programming**

**Learning Objectives**

The students will be able to

* **Strings Class**
* **String Builder Class**
* **Wrapper Classes**
* **Regular Expressions**
* **Pattern and Matcher Classes**

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| **Home Task** |

1. (Random Sentences) Write an application that uses random-number generation to create sentences. Use four arrays of strings called article, noun, verb and preposition. Create a sentence by selecting a word at random from each array in the following order: article, noun, verb, preposition, article and noun. As each word is picked, concatenate it to the previous words in the sentence. The words should be separated by spaces. When the final sentence is output, it should start with a capital letter and end with a period. The application should generate and display 20 sentences The article array should contain the articles "the", "a", "one", "some" and "any"; the noun array should contain the nouns "boy", "girl", "dog", "town" and "car"; the verb array should contain the verbs "drove", "jumped", "ran", "walked" and "skipped"; the preposition array should  
   contain the prepositions "to", "from", "over", "under" and "on".
2. (Tokenizing Telephone Numbers) Write an application that inputs a telephone number as a  
   string in the form (555) 555-5555. The application should use String method split to extract the  
   area code as a token, the first three digits of the phone number as a token and the last four digits of the phone number as a token. The seven digits of the phone number should be concatenated into one string. Both the area code and the phone number should be printed. Remember that you’ll have to change delimiter characters during the tokenization process.
3. (Tokenizing and Comparing Strings) Write an application that reads a line of text, tokenizes the line using space characters as delimiters and outputs only those words beginning with the  
   letter "b".