Lab 10 Regular Expressions

1. Write the program that classify the given passwords that satisfy the following constrains or not.

   - Contain at less 2 capital letters

   - Contain at less 2 number digits

   - Contain at less 2 symbol letters, symbol letters $, @ or &.

   - Contain at less 8 characters.

   - No space.

   The given passwords come from file provided by command-line arguments with the following format.

   ```
   number_of_data
   password1 may contains space
   password2 may contains space
   ...
   ```

   File: ass-01-input.txt

   ```
   6
   !qaz@wsx
   QwertY1234$$
   AAbb&@11
   !Qaz 2Wsx 3Edc $Rfv
   P@s$w0rD2
   PassWord1234.$
   ```

   Example: php ass-01.php ass-01-input.txt

   ```
   Satisfied:
       QwertY1234$$
       AAbb&@11
       P@s$w0rD2
   Non-satisfied:
       !qaz@wsx
       !Qaz 2Wsx 3Edc $Rfv
       PassWord1234.$
   ```

2. Write the program that extracts numbers (excluding text with numbers) from contents of the given file (given by command-line arguments).

   File: `ass-02-input.txt` (one sentence may across multiple lines)

   ```
   13 is my lucky number. And I like INX246 very much. After midterm
   exam on 1/Oct/2019, I get 25.50 from 40. Then I must to get more
   than 29.5 on final exam 0_0. The final exam is on 1/Dec/2019.
   ```

   Example: `php ass-02.php ass-02-input.txt`

   ```
   13

   1

   2019

   25.50

   40

   29.5

   1

   2019
   ```

3. Write the program that extracts abbreviation from contents of the given file (given by command-line arguments).

   The abbreviation is a word that combines of capital letters inside bracket and without space.

   File: `ass-03-input.txt` (one sentence may across multiple lines)

   ```
   College of Arts, Media and Technology (CAMT) is my faculty. My sister
   is studying in faculty of Engineer (not CAMT). But we are studying in
   Chiang Mai University (CMU). CMU is a great university in my opinion
   (VuV).
   ```

   Example: `php ass-03.php ass-03-input.txt`

   ```
   CAMT

   CMU
   ```

4. Write the program that extracts name from contents of the given file (given by command-line arguments).

    The name is a group of words that start with capital letters follow by normal letters but except "My" or "The" (exception words).

    Hint: You may check exception words after extracting regular expressions result.

    File: `ass-04-input.txt` (one sentence may across multiple lines)

    ```
    My name is Adam Smith. I am studying in College Of Arts Media And
    Technology, CAMT in short. My best friend is Susan.
    ```

    Example: `php ass-04.php ass-04-input.txt`

    ```
    Adam Smith
    ```

    ```
    College Of Arts Media And Technology
    ```

    ```
    Susan
    ```