

## Assignment Instructions: Passwords

**Instructions:** Write a program to generate random passwords; the user should be able to select the character set and the length.

1. Create a new project called 5.07 Password Generator in the Mod05 Assignments folder.
2. Create a class called Password in the newly created project folder.
3. Display a menu that gives the user a choice of character sets to use to construct the password. (Note: Do not use the first range of punctuation symbols with ASCII values from 33–47).
4. Allow the user to select the number of characters in the password (at least up to 14).
5. Create a randomly generated password from the character sets selected by the user.
6. Check the strength of three passwords of different length from each menu option with the [Kaspersky Secure Password Check](#). Tabulate the strength of your 12 passwords (see instructions that follow).
7. Create two strong, memorable passwords and test them with the password checker. Report your memorable passwords, what they stand for, and their strength (see instructions that follow).



**Suggestions:** Make an outline on paper, use pseudocode, or diagram logic sections with a flowchart. Would it be easier to write the first or the fourth menu option first?

**Expected Output:** The output of your program should resemble the following screenshot:

```
BlueJ: Terminal Window - 5.07 Password Generator
Options

          Password Generation Menu
*****
*   [1] Lowercase Letters           *
*   [2] Lowercase & Uppercase Letters *
*   [3] Lowercase, Uppercase, and Numbers *
*   [4] Lowercase, Uppercase, Numbers, and Punctuation *
*   [5] Quit                       *
*****
Enter Selection (1-5): 4

Password Length (1-14): 14

Password: z4yjcoP27[A2X6
```

Some additional sample results from the program are shown as follows with their strength ratings determined by the password checker.

Menu Selection	Password Length	Password	Strength
1	6	mwpvys	Weak
2	10	KIxsmhhJyR	Medium
3	12	j4xUnj4E7Nkv	Strong
4	14	{C5lEak]\qQ0Ly	Best

Copy and paste the following information into a Microsoft® Word® or word processing document to submit along with your program. Answer the questions and fill in the table. **Adjust the spacing** as needed to adequately answer each question.

1. List your two memorable passwords created for this assignment and what they stand for.

1st password: Sgambhir200524

2nd password: sreeyaAugust24

These two passwords have my name and birthday in which makes them easier to remember. They include my name in some type of way and my birthday.

2. In your opinion, are memorable or random passwords better? Explain your answer.

However, when I tested these two passwords, they weren't strong passwords. Random passwords with a longer length and more characters are better than memorable passwords.

3. Highlight, circle, or otherwise indicate each of the following that apply to you.

- Have you told anyone your password?
- Is your password written down somewhere?
- Are you still using the default password for any accounts (e.g., *password*, *student*, your user name, etc.)?
- Do you use the same password for multiple accounts?
- Is your password more than six months old?
- Does your password contain only letters?
- Is your password fewer than eight characters?
- Does your password contain any recognizable words?
- Does your password contain the name of a pet, friend, or relative?

4. Fill in the following table for each of your randomly created passwords.

Menu Selection	Password Length	Password	Strength
1	8	peredowq	weak
1	10	dapkuyhhnh	medium
2	6	NXKTWA	weak
2	14	GIHSTGFKSPWHDJ	best
3	6	UMhjBy	weak

3	8	BigzuWEv	medium
4	8	O1>pJZU;	medium
4	14	r;FOeoA82[VxXU	best