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## Background

Read about MPIN that is used to access mobile banking apps.

Many a times users end up setting an MPIN that is guessable because

- 1. It is a commonly used MPIN eg 1122
- 2. It is a combination of easily known demographics of the user. Eg: if the birthdate is 02-Jan-1998 then MPIN could be 0201 or 9802 or 0201 etc. Demographics such as these could be used alone or in a combination
  - a. DOB
  - b. Wedding Anniversary
  - c. Spouse birthday

## Solutions Required

- 1. Part A: Assume that the MPIN is 4-digits. Write a program that suggests if the MPIN is a commonly used one. Ignore the demographics for this part
- 2. Part B: Enhance the above to take user's demographics as input and provides an output
  - a. Strength: WEAK or STRONG
- 3. Part C: Enhance the above to provide the following outputs
  - a. Strength: WEAK or STRONG
  - b. If weak then the reason why was it considered weak: It should give from the following the reasons as an array. Array should be empty if Strength is STRONG and non-empty if WEAK
    - i. COMMONLY\_USED
    - ii. DEMOGRAPHIC\_DOB\_SELF
    - iii. DEMOGRAPHIC\_DOB\_SPOUSE
    - iv. DEMOGRAPHIC\_ANNIVERSARY
- 4. Part E: Above with a 6-digit PIN
- 5. Write code that tests the above written code using a set of inputs. Write at least 20 test case scenarios