**Technical Design Document**

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**Program Description:**

The goal of this code is to create a program that determines whether the phone number, SSN, and ZIP code provided by the user are valid or invalid.

**Function Name:** validate\_phone(phone)

**Description:** This function checks if the phone number provided by the user is valid.

**Parameters:** phone – this stands for the phone number the user inputs that needs to be validated.

**Variables:**

1. phone – phone number to validate
2. pattern – regular expression string used to match valid phone numbers

**Logical Steps:**

1. define a regular expression pattern to match valid phone formats
2. user re.match () to validate the phone number provided by the user
3. return True if valid and False if the input is invalid

**Returns:** True or False

**Function Name:** validate\_ssn(ssn)

**Description:** This function checks if the social security number provided by the user is valid.

**Parameters:** ssn – this stands for the SSN provided by the user that needs to be validated.

**Variables:**

1. ssn – ssn to validate
2. pattern – expression to validate ssn

**Logical Steps:**

1. define a regular expression pattern for valid SSNs
2. user re.match () to validate the ssn number provided by the user
3. return True if valid and False if the input is invalid

**Returns:** True or False

**Function Name:** validate\_zip(zip\_code)

**Description:** This function checks if the ZIP code provided by the user is valid. **Parameters:** zip\_code – this stands for the ZIP the user entered, which needs to be validated.

**Variables:**

1. zip\_code – ZIP code to validate
2. pattern – expression to validate ZIP

**Logical Steps:**

1. define a regular expression pattern for valid ZIP code formats
2. user re.match () to validate the ZIP code provided by the user
3. return True for valid input and False for invalid input

**Returns:** True or False

**Function Name:** main ()

**Description:** This function stores user input and determines if each entry is valid or invalid.

**Parameters:** None

**Variables:**

1. phone – phone number that the user inputs
2. ssn – user input for the Social Security Number
3. zip\_code – user input for the ZIP code

**Logical Steps:**

1. prompt the user to enter a phone number
2. prompt the user to enter a Social Security Number
3. prompt the user to enter a ZIP code
4. call on the validate\_phone(), validate\_ssn(), validate\_zip() functions
5. determine whether each input is valid or invalid and print the results

**Returns:** Validation results

[COP2373 Repository](https://github.com/kristinachorna/COP2373)

A screenshot of a computer

Description automatically generated