**Technical Design Document Template**

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**Program Description:**

This program prompts the user for a phone number, social security number, or zip code and checks whether it is valid or not.

**Functions used in the Program (list in order as they are called):**

1. **Function Name:** main()

**Description:** Prompts user to enter a number, and displays whether it is valid or not.

**Parameters:** None

**Variables:**

* Sequence\_to\_validate(string): string of numbers and dashes to signify a phone number, social security number, or zip code
* Is\_sequence\_valid(string):variable holding the return value from number\_validator, holding a string of whether the user’s number is valid or not.

**Logical Steps:**

1. Prompt user for a number
2. Send number to number\_validator
3. Get and print the return value, indicating whether the number is valid or not.

**Returns:** None.

2. **Function Name:** number\_validator(sequence)

**Description:** Checks user’s number against regular expressions to validate whether it is valid.

**Parameters:** sequence(string): sequence\_to\_validate from main(), the sequence of numbers input by the user.

**Variables:**

* Phone\_number\_expression(string): holds the regular expression for a phone number.
* Ssn\_expression(string):holds the regular expression for a social security number.
* Zip\_code\_expression(string): holds the regular expression for a zip code.
* Sequence(string): holds the value passed in from main(), the sequence input by user.

**Logical Steps:**

1. Assigns variables
2. Matches sequence to regular expressions
3. Returns different value depending on what is matched

**Returns:** The function returns a string indicating whether the user’s sequence is a valid phone number, social security number, zip code, or is invalid

**Logical Steps:**

1. Main() calls number\_validator(sequence)

**Link to your repository:** <https://github.com/dyhlan/COP2373>

**Output Screenshot: (make sure big enough so I can see)**

**A computer screen with white text

AI-generated content may be incorrect.**