**Assignment 3**

class Account:

    """

    Represents a user account with a username and password.

    """

    def \_\_init\_\_(self, username, password):

        # Initialize account with username and password

        self.username = username

        self.\_\_password = password

    def set\_username(self, username):

        # Set a new username

        self.username = username

    def set\_password(self, password):

        # Set a new password

        self.\_\_password = password

    def get\_username(self):

        # Return the username

        return self.username

class Command:

    """

    Represents a command given to the bot.

    """

    def \_\_init\_\_(self, description, command\_input):

        # Initialize command with description and input

        self.description = description

        self.input = command\_input

    def get\_description(self):

        # Return the command's description

        return self.description

    def get\_input(self):

        # Return the input for the command

        return self.input

class Notification:

    """

    Represents a notification sent to the user.

    """

    def \_\_init\_\_(self, notif\_type, content, timestamp):

        # Initialize notification with type, content, and timestamp

        self.type = notif\_type

        self.content = content

        self.timestamp = timestamp

    def get\_type(self):

        # Return the type of the notification

        return self.type

    def get\_content(self):

        # Return the notification content

        return self.content

    def get\_timestamp(self):

        # Return when the notification was sent

        return self.timestamp

class Product:

    """

    Represents a product to track.

    """

    def \_\_init\_\_(self, name, url, options=None):

        # Initialize the product with a name, URL, and options (like size, color)

        self.name = name

        self.url = url

        self.options = options if options is not None else {}

    def set\_url(self, url):

        # Update the product's URL

        self.url = url

    def get\_name(self):

        # Return the product's name

        return self.name

    def get\_options(self):

        # Return the options (like size, color)

        return self.options

    def fetch\_product\_details(self):

        # This would fetch product details, like price, from the web

        details = {

            'price': 'To be fetched',  # Placeholder

            'availability': 'To be checked'

        }

        return details

class User:

    """

    Represents a user of the system.

    """

    def \_\_init\_\_(self, user\_id, email):

        # Initialize user with id and email

        self.\_\_user\_id = user\_id

        self.email = email

    def get\_user\_id(self):

        # Return the user's ID

        return self.\_\_user\_id

    def get\_email(self):

        # Return the user's email

        return self.email

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