Password Generator

```
import random

def generatePassword(pwlength):
    alphabet = "abcdefghijklmnopqrstuvwxyz"
    passwords = []

    for length in pwlength:  # Iterate up to the specified password length
        password = ""
        for _ in range(length):  # Use _ as a throwaway variable
            next_letter_index = random.randrange(len(alphabet))
            password += alphabet[next_letter_index]

        password = replaceWithNumber(password)
        password = replaceWithUppercaseLetter(password)

        passwords.append(password)

    return passwords

def replaceWithNumber(pword):
    for _ in range(random.randrange(1, 3)):
        replace_index = random.randrange(len(pword) // 2)
        pword = pword[0:replace_index] + str(random.randrange(10)) + pword[replace_index+1:]
    return pword

def replaceWithUppercaseLetter(pword):
    for _ in range(random.randrange(1, 3)):
        replace_index = random.randrange(len(pword) // 2, len(pword))
        pword = pword[0:replace_index] + pword[replace_index].upper() + pword[replace_index+1:]
    return pword

def main():
    numPasswords = int(input("How many passwords do you want to generate? "))
    print("Generating " + str(numPasswords) + " passwords")
    passwordLengths = []

    print("Minimum length of password should be 3")

    for i in range(numPasswords):
        length = int(input("Enter the length of Password #" + str(i+1) + " "))
        if length < 3:
            length = 3
        passwordLengths.append(length)

    Passwords = generatePassword(passwordLengths)

    for i in range(numPasswords):
        print("Password #" + str(i+1) + " = " + Passwords[i])

if __name__ == "__main__":
    main()
```

```
How many passwords do you want to generate? 3
Generating 3 passwords
Minimum length of password should be 3
Enter the length of Password #1 5
Enter the length of Password #2 4
Enter the length of Password #3 4
Password #1 = 3gZzr
Password #2 = s5uT
Password #3 = j2Ir
```

Number Guess Game

```
import random #bring in the random number
import time
number=random.randint(1, 200) #pick the number between 1 and 200

def intro():
    print("May I ask you for your name?")
    name=input() #asks for the name
    print(name + ", we are going to play a game. I am thinking of a number between 1 and 200")
    time.sleep(.5)
    print("Go ahead. Guess!")
```

```
    print("Go ahead. Guess!")

def pick():
    guessesTaken = 0
    while guessesTaken < 6: #if the number of guesses is less than 6
        time.sleep(.25)
        enter=input("Guess: ") #inserts the place to enter guess
        try: #check if a number was entered
            guess = int(enter) #stores the guess as an integer instead of a string

            if guess<=200 and guess>=1: #if they are in range
                guessesTaken=guessesTaken+1 #adds one guess each time the player is wrong
                if guessesTaken<6:
                    if guess<number:
                        print("The guess of the number that you have entered is too low")
                    if guess>number:
                        print("The guess of the number that you have entered is too high")
                    if guess != number:
                        time.sleep(.5)
                        print("Try Again!")
                if guess==number:
                    break #if the guess is right, then we are going to jump out of the while block
            if guess>200 or guess<1: #if they aren't in the range
                print("Silly Goose! That number isn't in the range!")
                time.sleep(.25)
                print("Please enter a number between 1 and 200")

        except: #if a number wasn't entered
            print("I don't think that "+enter+" is a number. Sorry")

    if guess == number:
        guessesTaken = str(guessesTaken)
        print('Good job, ' + name + '! You guessed my number in ' + guessesTaken + ' guesses!')

    if guess != number:
        print('Nope. The number I was thinking of was ' + str(number))

playagain="yes"
while playagain=="yes" or playagain=="y" or playagain=="Yes":
    intro()
    pick()
    print("Do you want to play again?")
    playagain=input()
```

```
 May I ask you for your name?
 M Kishore
 M Kishore, we are going to play a game. I am thinking of a number between 1 and 200
 Go ahead. Guess!
 Guess: 45
 The guess of the number that you have entered is too low
 Try Again!
 Guess: 47
 The guess of the number that you have entered is too low
 Try Again!
 Guess: 56
 The guess of the number that you have entered is too low
 Try Again!
 Guess: 67
 The guess of the number that you have entered is too low
 Try Again!
 Guess: 78
 The guess of the number that you have entered is too low
 Try Again!
 Guess: 87
 Nope. The number I was thinking of was 103
 Do you want to play again?
 no
```

Simple TO-Do Application

```
# Define an empty list to store tasks
tasks = []

# Function to display the to-do list
def display_tasks():
    if not tasks:
        print("Your to-do list is empty.")
    else:
        print("To-Do List:")
        for i, task in enumerate(tasks, start=1):
            status = "Done" if task["completed"] else "Not Done"
            print(f"{i}. {task['task']} ({status})")

# Function to add a task to the to-do list
def add_task(task_name):
    task = {"task": task_name, "completed": False}
    tasks.append(task)
    print(f"Task '{task_name}' added to your to-do list.")

# Function to mark a task as completed
def mark_completed(task_number):
    if 1 <= task_number <= len(tasks):
        tasks[task_number - 1]["completed"] = True
        print(f"Task {task_number} marked as completed.")
    else:
        print("Invalid task number. Please enter a valid task number.")

# Function to remove a task from the to-do list
def remove_task(task_number):
    if 1 <= task_number <= len(tasks):
        removed_task = tasks.pop(task_number - 1)
        print(f"Task '{removed_task['task']}' removed from your to-do list.")
    else:
        print("Invalid task number. Please enter a valid task number.")

# Main program loop
while True:
    print("\nOptions:")
    print("1. Display to-do list")
    print("2. Add a task")
    print("3. Mark a task as completed")
    print("4. Remove a task")
    print("5. Quit")
    choice = input("Enter your choice: ")

    if choice == '1':
        display_tasks()
    elif choice == '2':
        task_name = input("Enter the task: ")
        add_task(task_name)
    elif choice == '3':
        display_tasks()
        task_number = int(input("Enter the task number to mark as completed: "))
        mark_completed(task_number)
    elif choice == '4':
        display_tasks()
        task_number = int(input("Enter the task number to remove: "))
        remove_task(task_number)
    elif choice == '5':
        break
    else:
        print("Invalid choice. Please enter a valid option.")
```

```
 Options:
 1. Display to-do list
 2. Add a task
 3. Mark a task as completed
 4. Remove a task
 5. Quit
 Enter your choice: 2
 Enter the task: hi how are you
 Task 'hi how are you' added to your to-do list.

 Options:
 1. Display to-do list
 2. Add a task
 3. Mark a task as completed
 4. Remove a task
 5. Quit
 Enter your choice: 2
 Enter the task: where are you from?
 Task 'where are you from?' added to your to-do list.
```

```
Options:
1. Display to-do list
2. Add a task
3. Mark a task as completed
4. Remove a task
5. Quit
Enter your choice: 1
To-Do List:
1. hi how are you (Not Done)
2. where are you from? (Not Done)

Options:
1. Display to-do list
2. Add a task
3. Mark a task as completed
4. Remove a task
5. Quit
Enter your choice: 5
```