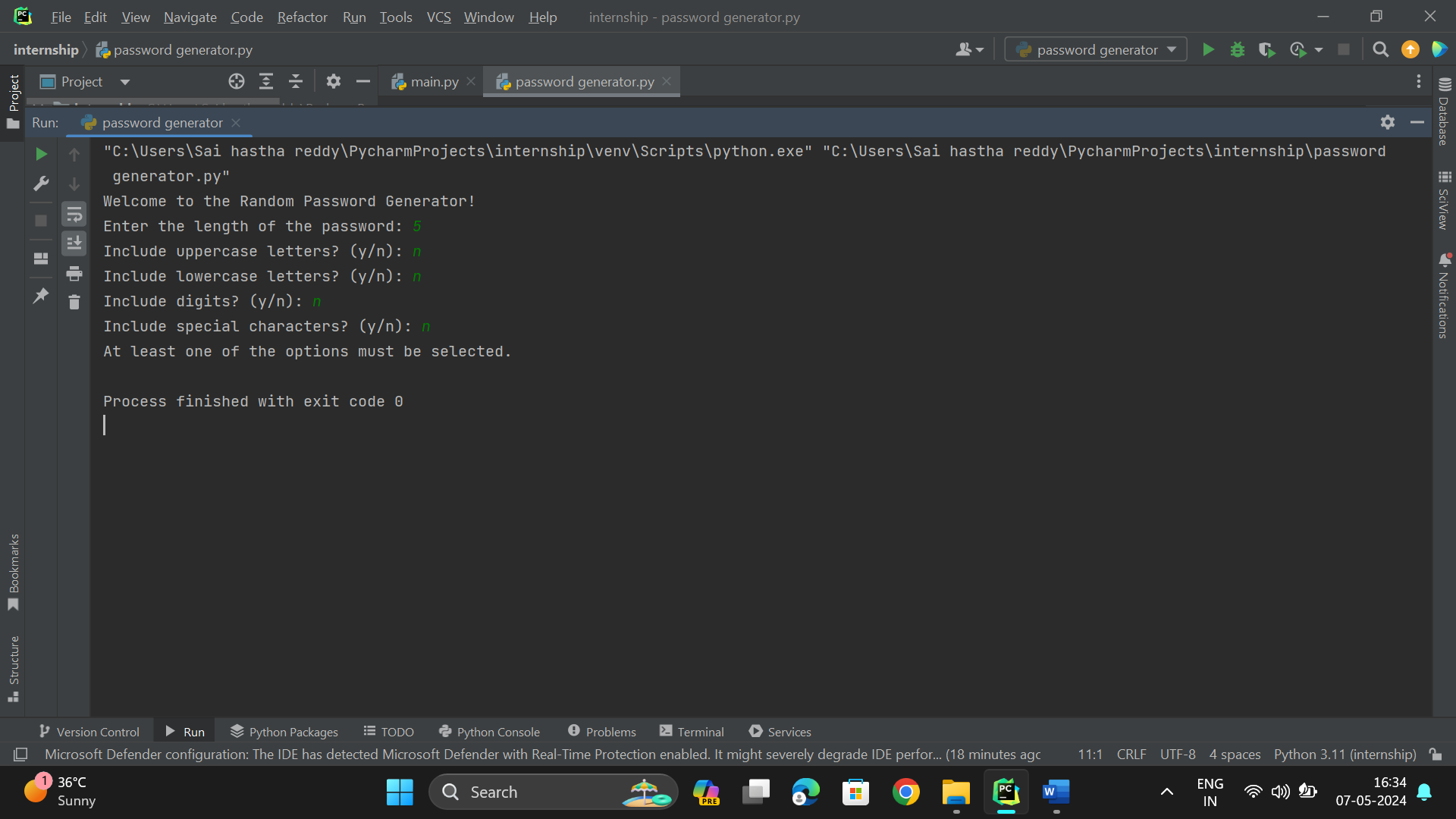
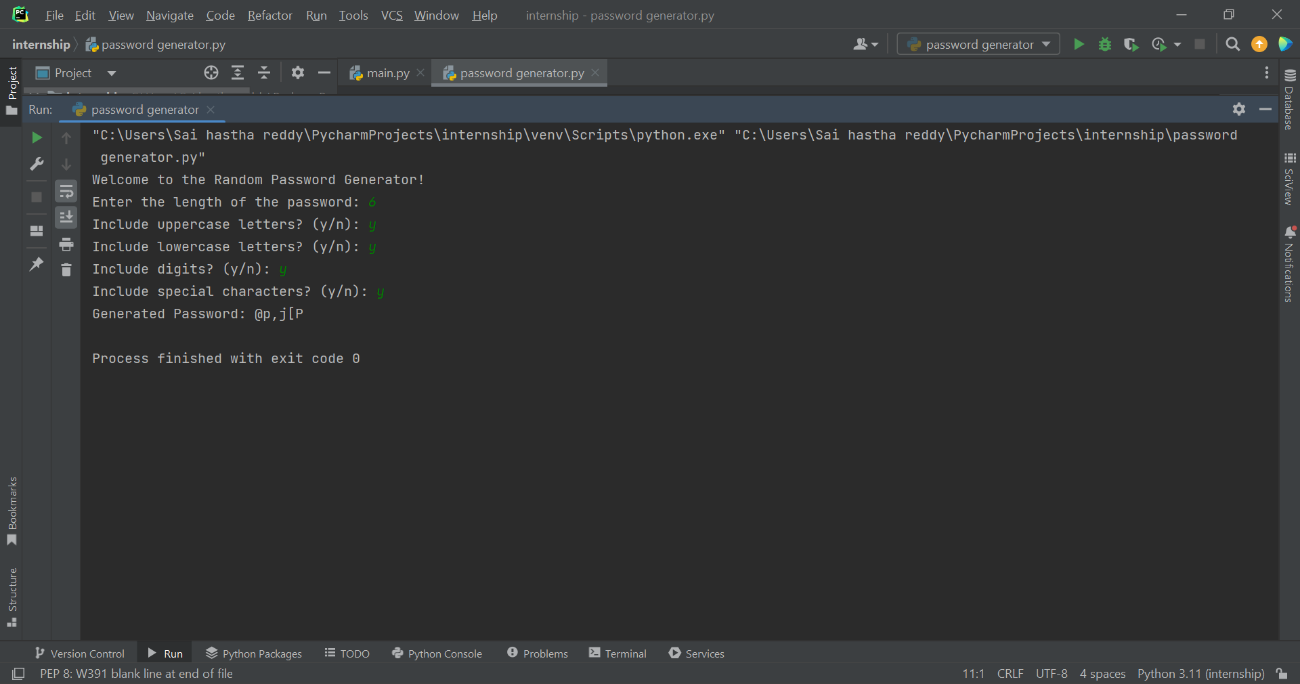
**Random Password Generator**

**Input:**

import random # provides function for generating random passwords  
import string # constants and functions for working with strings  
  
# Generates a secure, random password based on the given criteria  
def generate\_password (length , uppercase = False , lowercase = True , digits = True , special\_chars = False) :  
 characters = "" # initializes a empty string,will contain the characters of password to be generated  
  
 # determines which type of character to be included if it is true  
 if uppercase:  
 characters += string.ascii\_uppercase  
 if lowercase:  
 characters += string.ascii\_lowercase  
 if digits:  
 characters += string.digits  
 if special\_chars:  
 characters += string.punctuation  
  
# generates the password by selecting random characters from the characters string for the specified length  
 password = ''.join(random.choice(characters) for \_ in range(length))  
 return password # returns the generated password  
  
  
def main(): # main , serves as entry point of the program  
 print("Welcome to the Random Password Generator!")  
  
 # specify length of the password  
 length = int(input("Enter the length of the password: "))  
  
 # Ask user to specify inclusion of uppercase, lowercase, digits, and special characters.  
 uppercase = input("Include uppercase letters? (y/n): ").lower() == 'y'  
 lowercase = input("Include lowercase letters? (y/n): ").lower() == 'y'  
 digits = input("Include digits? (y/n): ").lower() == 'y'  
 special\_chars = input("Include special characters? (y/n): ").lower() == 'y'  
  
# if none of the options are selected by user , prints a message and exits the program  
 if not (uppercase or lowercase or digits or special\_chars):  
 print("At least one of the options must be selected.")  
 return  
# calls the generate\_password function with user input parameters to generate a password  
 password = generate\_password(length, uppercase, lowercase, digits, special\_chars)  
 print("Generated Password:", password)  
  
  
if \_\_name\_\_ == "\_\_main\_\_":  
 main() # it calls main function to start the program  
# This allows the script to be both imported as a module and run directly as a standalone program

**Output:**

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