

**password.py**

```
1 import random
2 import string
3
4 def generate_password(length):
5     lowercase = string.ascii_lowercase
6     uppercase = string.ascii_uppercase
7     digits = string.digits
8     special_characters = string.punctuation
9     all_characters = lowercase + uppercase + digits + special_characters
10    password = [
11        random.choice(lowercase),
12        random.choice(uppercase),
13        random.choice(digits),
14        random.choice(special_characters)
15    ]
16    password += random.choices(all_characters, k=length - 4)
17    random.shuffle(password)
18    return ''.join(password)
19
20 def main():
21     print("Welcome to the Password Generator!")
22     while True:
23         try:
24             length = int(input("Enter the desired length of the password (minimum 8): "))
25             if length < 8:
26                 print("Password length should be at least 8 characters.")
27                 continue
28             password = generate_password(length)
29             print(f"Generated Password: {password}")
30             again = input("Generate another password? (y/n): ").lower()
31             if again != 'y':
32                 print("Thank you for using the Password Generator!")
33                 break
34         except ValueError:
35             print("Invalid input! Please enter a valid number.")
36
37 if __name__ == "__main__":
38     main()
39
```