Girls' Programming Network

Secret Diary Chatbot!

In this workbook, you will make a chatbot that lets you write and read secret contents of your diary and add a password to keep it safe from nosy siblings or friends!

FOR TUTOR EYES ONLY

This project was created by GPN Australia for GPN sites all around Australia!

This workbook and related materials were created by tutors at:

Sydney, Canberra and Perth

Girls' Programming Network

If you see any of the following tutors don't forget to thank them!!

Writers

Amanda Hogan
Isabella Hogan
Renee Noble
Molly Menzies

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ATLASSIAN

Today's Project Plan:

Secret Diary Chatbot

We'll make a computer program that lets us read and write to a secret diary file. We don't want others to read our diary so we'll protect it with a password and secret questions.

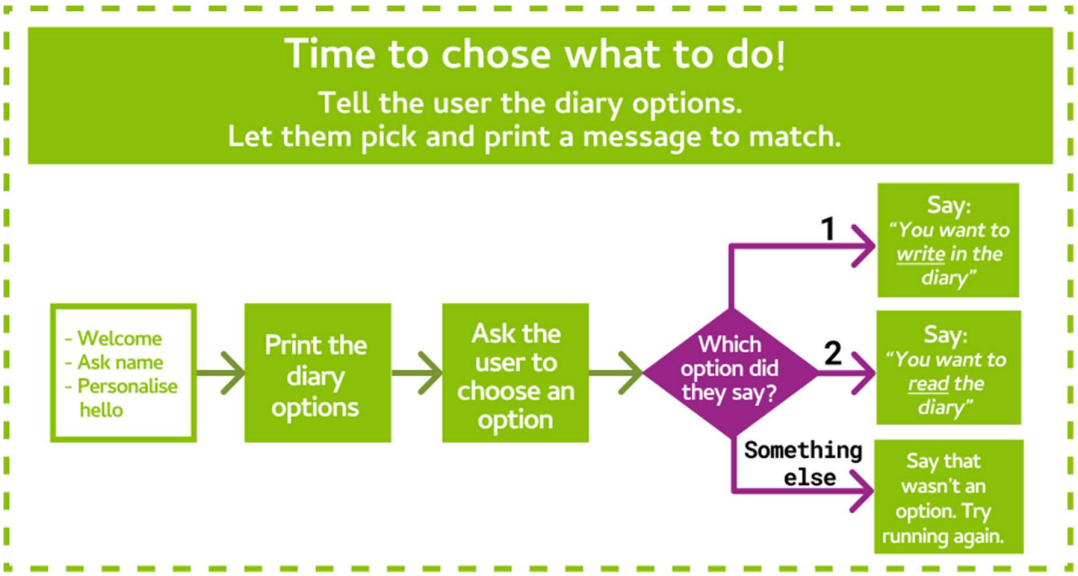
1. Welcome the user
2. Deal with if they want to read or write to the diary
3. Write secret messages to the diary
4. Read the contents of the diary
5. Add a secret password to the diary

Once your base chatbot works add cool extensions!

There's extensions for encrypting your data with emoji, for adding tricky maths questions to protect from little siblings, and ways to make your chatbot sassier!

Part 1: Who are you?

Part 1	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`time.sleep(0.5)`	Bonus 1.5: Wait a second!



Part 2: What do you want to do?

Part 2	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`time.sleep(0.5)`	Bonus 1.5: Wait a second!

`action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`if action == "1":` `  print("You want to write in the diary")`	2.2: Do you want to write?
`elif action == "2":` `  print("You want to read the diary")`	2.3 Do you want to read?
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!

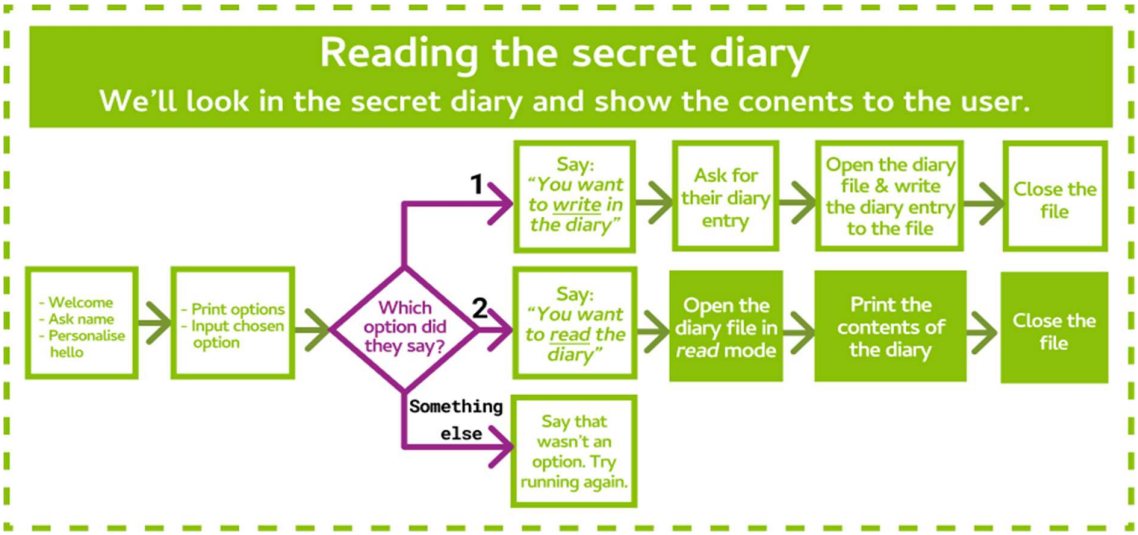
Part 3: Writing in the Diary

Part 3	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`time.sleep(0.5)`	Bonus 1.5: Wait a second!

`action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`if action == "1":` `  print("You want to write in the diary")`	2.2: Do you want to write?
`  diary_entry = input("what is your message? ")`	3.1 Tell me your secret
`  diary = open("secret_diary.txt", "a")`	3.2: Open the diary!
`  diary_entry = diary_entry + "\n"` `  diary.write(diary_entry)`	3.3: Writing our secrets!
`  diary.close() #text won't be written to file without this line`	3.4: Close the diary!
`elif action == "2":` `  print("You want to read the diary")`	2.3 Do you want to read?
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!

Part 4: Reading the Diary



Part 4	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`time.sleep(0.5)`	Bonus 1.5: Wait a second!

`action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`if action == "1":` `  print("You want to write in the diary")`	2.2: Do you want to write?
`  diary_entry = input("what is your message? ")`	3.1 Tell me your secret
`  diary = open("secret_diary.txt", "a")`	3.2: Open the diary!

`  diary_entry = diary_entry + "\n"` `  diary.write(diary_entry)`	3.3: Writing our secrets!
`  diary.close() #text won't be written to file without this line`	3.4: Close the diary!
`elif action == "2":` `  print("You want to read the diary")`	2.3 Do you want to read?
`  diary = open("secret_diary.txt", "r")`	4.1: Open the diary!
`  content = diary.read()` `  print(content)`	4.2: Read the diary!
`  diary.close()`	4.3: Close the diary!
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!

Part 5: It's a SECRET Diary!

Part 5	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`password = "open_sesame"`	5.1: Let's make a password
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`guessed_password = input("What's the secret password? ")`	5.2: What's the password?
`while guessed_password != password:` `  guessed_password = input("What's the password? ")`	5.3: Guessing Game
`time.sleep(0.5)`	Bonus 1.5: Wait a second!

`action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`if action == "1":` `  print("You want to write in the diary")`	**2.2: Do you want to write?**
`  diary_entry = input("what is your message? ")`	**3.1 Tell me your secret**
`  diary = open("secret_diary.txt", "a")`	**3.2: Open the diary!**
`  diary_entry = diary_entry + "\n"` `  diary.write(diary_entry)`	**3.3: Writing our secrets!**
`  diary.close() #text won't be written to file without this line`	**3.4: Close the diary!**
`elif action == "2":` `  print("You want to read the diary")`	**2.3 Do you want to read?**
`  diary = open("secret_diary.txt", "r")`	**4.1: Open the diary!**
`  content = diary.read()` `  print(content)`	**4.2: Read the diary!**
`  diary.close()`	**4.3: Close the diary!**
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	**2.4: I don't understand!**

Extension 6: It's a trap!

Sometimes siblings like to get in your stuff, so we're going to set a trap for anyone trying to sneak into our secret diary. Let's make a decoy password that shows them a fake diary if they enter it.

Extension 6	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`password = "open_sesame"`	5.1: Let's make a password
`decoy_password = "abc123"`	6.1: Decoy Password
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`guessed_password = input("What's the secret password? ")`	5.2: What's the password?
`while guessed_password != password and guessed_password != decoy_password:` `  guessed_password = input("What's the password? ")`	6.2: Let them through!
`if guessed_password == decoy_password:` `  print("The secret is I like pie")`	6.3: Fake news!
`else:` `#NOTE: everything below must be indented`	6.4: Could the real Secret Diary please step forward?
`  time.sleep(0.5)`	Bonus 1.5: Wait a second!

`  action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`  if action == "1":`	2.2: Do you want to write?

`    print("You want to write in the diary")`	
`    diary_entry = input("what is your message? ")`	3.1 Tell me your secret
`    diary = open("secret_diary.txt", "a")`	3.2: Open the diary!
`    diary_entry = diary_entry + "\n"` `    diary.write(diary_entry)`	3.3: Writing our secrets!
`    diary.close() #text won't be written to file without this line`	3.4: Close the diary!
`  elif action == "2":` `    print("You want to read the diary")`	2.3 Do you want to read?
`    diary = open("secret_diary.txt", "r")`	4.1: Open the diary!
`    content = diary.read()` `    print(content)`	4.2: Read the diary!
`    diary.close()`	4.3: Close the diary!
`  else:` `    print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!

Extension 8: Intelligent Checks!

Extension 8	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`password = "open_sesame"`	5.1: Let's make a password
`decoy_password = "abc123"`	6.1: Decoy Password
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`guessed_password = input("What's the secret password? ")`	5.2: What's the password?
`while guessed_password != password and guessed_password != decoy_password:` `  guessed_password = input("What's the password? ")`	6.2: Let them through!
`answer = input("What's 2 + 2")`	8.1: You're so smart!

`if answer != "4":`
`  print("You're not smart enough to look at the secret diary!")`
`  exit()`
	8.2: Or are you?

`if guessed_password == decoy_password:` `  print("The secret is I like pie")`	6.3: Fake news!
`else:` `#NOTE: everything below must be indented`	6.4: Could the real Secret Diary please step forward?
`  time.sleep(0.5)`	Bonus 1.5: Wait a second!
`  action = input("""What would you like to do?`	2.1: Welcome to the Secret Diary

1) read the diary 2) write into the diary 3) end the program """)	
`if action == "1":` `  print("You want to write in the diary")`	2.2: Do you want to write?
`diary_entry = input("what is your message? ")`	3.1 Tell me your secret
`diary = open("secret_diary.txt", "a")`	3.2: Open the diary!
`diary_entry = diary_entry + "\n"` `diary.write(diary_entry)`	3.3: Writing our secrets!
`diary.close() #text won't be written to file without this line`	3.4: Close the diary!
`elif action == "2":` `  print("You want to read the diary")`	2.3 Do you want to read?
`diary = open("secret_diary.txt", "r")`	4.1: Open the diary!
`content = diary.read()` `print(content)`	4.2: Read the diary!
`diary.close()`	4.3: Close the diary!
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!

Extensions 9: Make it Funnier!

Tutor note: requires extension 6 to be done first.

Extension 9	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`import random` `answers = ["Yes", "No", "Maybe", "Ask me later"]`	9.2: Magic 8 Ball
`password = "open_sesame"`	5.1: Let's make a password
`decoy_password = "abc123"`	6.1: Decoy Password
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`guessed_password = input("What's the secret password? ")`	5.2: What's the password?
`while guessed_password != password and guessed_password != decoy_password:` `  guessed_password = input("What's the password? ")`	6.2: Let them through!
`if guessed_password == decoy_password:` `  print("The secret is I like pie")`	6.3: Fake news!

`^^this loop replaces the print statement above`
`  while True:`
`  input("Ask the magic 8 ball for advice. Enter a question: ")`
`  print(random.choice(answers))`
	9.2: Magic 8 Ball

`else:` `#NOTE: everything below must be indented`	6.4: Could the real Secret Diary please step forward?
`  time.sleep(0.5)`	Bonus 1.5: Wait a second!
	2.1: Welcome to the Secret

action = input("""What would you like to do? 1) read the diary 2) write into the diary 3) end the program """)	Diary
if action == "1": print("You want to write in the diary")	2.2: Do you want to write?
diary_entry = input("what is your message? ")	3.1 Tell me your secret
diary = open("secret_diary.txt", "a")	3.2: Open the diary!
diary_entry = diary_entry + "\n" diary.write(diary_entry)	3.3: Writing our secrets!
diary.close() #text won't be written to file without this line	3.4: Close the diary!
elif action == "2": print("You want to read the diary")	2.3 Do you want to read?
diary = open("secret_diary.txt", "r")	4.1: Open the diary!
content = diary.read() print(content)	4.2: Read the diary!
diary.close()	4.3: Close the diary!
else: print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")	2.4: I don't understand!

Extension 10: Enc🍏ding in Em🍏ji

Right now our diary is protected from snoops when they use the chatbot, because they need the password. **But what if someone just goes and opens the text file and reads it!**
We'll make our words unreadable by encoding them with emoji!

Extension 10	
`# Imports go here`	1.1: Welcome the user
`import time`	Bonus 1.5: Wait a second!
`password = "open_sesame"`	5.1: Let's make a password
`# Main code goes here` `print("Welcome to the Secret Diary Chatbot!")`	1.1: Welcome the user
`time.sleep(0.5)`	Bonus 1.5: Wait a second!
`name = input("What is your name? ")`	1.2: Identify yourself!
`print("Hello" + name)`	1.3: Personalised Welcome
`guessed_password = input("What's the secret password? ")`	5.2: What's the password?
`while guessed_password != password:` `  guessed_password = input("What's the password? ")`	5.3: Guessing Game
`time.sleep(0.5)`	Bonus 1.5: Wait a second!

`action = input("""What would you like to do?`
`1) read the diary`
`2) write into the diary`
`3) end the program """)`
	2.1: Welcome to the Secret Diary

`if action == "1":` `  print("You want to write in the diary")`	2.2: Do you want to write?
`  diary_entry = input("what is your message? ")`	3.1 Tell me your secret

`  diary = open("secret_diary.txt", "a", encoding="utf-8")`
`  diary_entry = diary_entry.replace("a", "🍏")`
`  diary_entry = diary_entry.replace("b", "🍌")`
`  # add more replacements`
	10.1: Apple-ify your message!

`  diary_entry = diary_entry + "\n"` `  diary.write(diary_entry)`	3.3: Writing our secrets!
`  diary.close() #text won't be written to file without this line`	3.4: Close the diary!
`elif action == "2":` `  print("You want to read the diary")`	2.3 Do you want to read?

`  diary = open("secret_diary.txt", "r", encoding="utf-8")`
`  content = diary.read()`
`  content = content.replace("🍏", "a")`
`  content = content.replace("👍", "b")`
`  # add more un-replacements`
	10.2: De-Apple-ify your diary!

`  content = diary.read()` `  print(content)`	4.2: Read the diary!
`  diary.close()`	4.3: Close the diary!
`else:` `  print("I don't know what you want to do! Run the program again and say either 1 to write or 2 to read")`	2.4: I don't understand!