

# Choose-Your-Own Adventure Project Requirements

## Step 1:

Write code that greets the user and outputs specific instructions telling the user how to interact with the Choose-Your-Own Adventure application.

```
print("Welcome to the Adventure Game!")  
print("Please answer the following questions to begin.")
```

On Console it shows

```
Welcome to the Adventure Game!  
Please answer the following questions to begin.  
What is your name? _
```

## Step 2:

After the application greets the user and provides instructions, write code with variables that asks the user to answer five questions before the story begins. Refer back to the worksheet you completed in Week 7, where you listed five variables and five questions to ask the user. Remember, answers to these questions will be incorporated into the story later when the story is told.

```
# Prompt user for input and perform data validation  
name = input("What is your name? ").strip()  
age = input("What is your age? ")  
gender = prompt_user(  
    "What is your gender? Male or Female? ", ["male", "female"])  
hometown = input("What is your hometown? ")  
occupation = input("What is your occupation? ")
```

On Console it shows

```
Please answer the following questions to begin.  
What is your name? john  
What is your age? 18  
What is your gender? Male or Female? Male  
What is your hometown? Beijing  
What is your occupation? Student
```

## Step 3:

Start outputting the story, incorporating the values stored in the variables. Where you place your variables throughout your story is entirely up to you. However, the story should start outputting to the screen. Later, in Step 4, the story will pause and ask the user to make a decision before continuing.

```
# Incorporate user input into story
story = f"Once upon a time, there was a brave adventurer named {name}. "
story += f"{name} was {age} years old and was from {hometown}. "
story += f"{name} was a {occupation} and was known throughout the land for their bravery and quick thinking. "
```

On Console it shows

```
You are on a quest to find a magical treasure. You come to a fork in the road. Do you go left or right? left
You continue on the path and come across a river. The river is deep and wide. Do you try to swim across or look for a bridge?
```

## Step 4:

Write code that asks the user to make a yes or no decision. (Refer back to the worksheet you completed in Week 7, where you described two decisions users will make.) Then, write an If-Else statement that changes the output based on the user's input. If you need assistance, revisit the Week 4 lab, Pizza Ordering Chatbot: Enhancements, Part 2, Step 14

```
# Handle decision making and incorporate user input into story
story = make_decision("You are on a quest to find a magical treasure. "
    "You come to a fork in the road. "
    "Do you go left or right? ",
    "left",
    "right",
    story)
```

On Console it shows

```
You are on a quest to find a magical treasure. You come to a fork in the road. Do you go left or right? left
You continue on the path and come across a river. The river is deep and wide. Do you try to swim across or look for a bridge?
```

## Step 5:

After the first decision, write code that asks the user to make another yes or no decision. Then, write an If-Else statement that changes the output based on the user's input

```

story = make_decision("You continue on the path and come across a river. "
                      "The river is deep and wide. "
                      "Do you try to swim across or look for a bridge? ",
                      "swim",
                      "bridge",
                      story)

```

On Console it shows

```

You are on a quest to find a magical treasure. You come to a fork in the road. Do you go left or right? left
You continue on the path and come across a river. The river is deep and wide. Do you try to swim across or look for a bridge? swim

```

## Step 6:

At the end of the story, write an If-Elif-Else statement that outputs one of the three alternate endings to the story. (Refer back to the alternate endings you wrote when you completed the worksheet in Week 7.) If you need assistance, reference the screenshot below. It's also helpful to revisit the Week 4 lab: Pizza Ordering Chatbot: Enhancements, Part 2, Step 12

```

if decision == "sword":
    ending = f"{name} used their sword to try to open the chest, but it was too strong. "
    ending += f"{name} was never able to find the treasure and returned home empty-handed."
else:
    ending = f"{name} used the key to open the chest and found the magical treasure inside. "
    ending += f"{name} lived happily ever after with their newfound riches."

```

## Step 7:

Add data validation using while loops.

- Data validation should be applied to all five question prompts and both decisions the user must make throughout the story.
- The loop should keep asking for a valid value until one is received.
- Each loop should check to make sure the user's response is not null, is spelled correctly, and is an acceptable value that doesn't cause the application to break. For additional help, revisit the Week 5 lab, Pizza Ordering Chatbot: Data Validation via While Loops.

```

# Prompt user for input and perform data validation
name = input("What is your name? ").strip()
while name == "":
    print("Please enter a valid name.")
    name = input("What is your name? ").strip()

age = input("What is your age? ")
while not age.isdigit() or int(age) < 1:
    print("Please enter a valid age.")
    age = input("What is your age? ")

gender = prompt_user(
    "What is your gender? Male or Female? ", ["male", "female"])

hometown = input("What is your hometown? ")
while hometown == "":
    print("Please enter a valid hometown.")
    hometown = input("What is your hometown? ")

occupation = input("What is your occupation? ")
while occupation == "":
    print("Please enter a valid occupation.")
    occupation = input("What is your occupation? ")

```

On console it shows

```

Welcome to the Adventure Game!
Please answer the following questions to begin.
What is your name? john
What is your age? -83
Please enter a valid age.
What is your age? _

```

## Step 8:

# Adventure game application

# Function to prompt user for input and perform data validation

```

def prompt_user(prompt, options):
    while True:
        user_input = input(prompt).strip().lower()

```

```
if user_input == "":
    print("Please enter a valid value.")
elif user_input not in options:
    print("Please enter a valid option.")
else:
    return user_input
```

# Function to handle decision making and incorporate user input into story

```
def make_decision(prompt, option1, option2, story_so_far):
    decision = prompt_user(prompt, [option1, option2])
    if decision == option1:
        story_so_far += f"\n\nYou chose {option1}."
    else:
        story_so_far += f"\n\nYou chose {option2}."
    return story_so_far
```

# Function to handle game play

```
def play_game():
    print("Welcome to the Adventure Game!")
    print("Please answer the following questions to begin.")

    # Prompt user for input and perform data validation
    name = input("What is your name? ").strip()
    while name == "":
        print("Please enter a valid name.")
        name = input("What is your name? ").strip()

    age = input("What is your age? ")
    while not age.isdigit() or int(age) < 1:
        print("Please enter a valid age.")
        age = input("What is your age? ")

    gender = prompt_user(
        "What is your gender? Male or Female? ", ["male", "female"])

    hometown = input("What is your hometown? ")
    while hometown == "":
        print("Please enter a valid hometown.")
        hometown = input("What is your hometown? ")

    occupation = input("What is your occupation? ")
    while occupation == "":
```

```

print("Please enter a valid occupation.")
occupation = input("What is your occupation? ")

# Incorporate user input into story
story = f"Once upon a time, there was a brave adventurer named {name}. "
story += f"{name} was {age} years old and was from {hometown}. "
story += f"{name} was a {occupation} and was known throughout the land for their bravery
and quick thinking. "

# Handle decision making and incorporate user input into story
story = make_decision("You are on a quest to find a magical treasure. "
    "You come to a fork in the road. "
    "Do you go left or right? ",
    "left",
    "right",
    story)

story = make_decision("You continue on the path and come across a river. "
    "The river is deep and wide. "
    "Do you try to swim across or look for a bridge? ",
    "swim",
    "bridge",
    story)

# Handle final decision making and output appropriate ending
ending = ""
decision = prompt_user("You finally arrive at the treasure's location. "
    "You see a chest with a keyhole. "
    "Do you try to open the chest with your sword or the key you found earlier?
",
    ["sword", "key"])
if decision == "sword":
    ending = f"{name} used their sword to try to open the chest, but it was too strong. "
    ending += f"{name} was never able to find the treasure and returned home empty-
handed."
else:
    ending = f"{name} used the key to open the chest and found the magical treasure inside.
"
    ending += f"{name} lived happily ever after with their newfound riches."

# Output final
print(story + "\n" + ending)

if __name__ == "__main__":
    play_game()

```

## Step 9:

```
Welcome to the Adventure Game!
Please answer the following questions to begin.
What is your name? john
What is your age? 18
What is your gender? Male or Female? Male
What is your hometown? beijing
What is your occupation? student
You are on a quest to find a magical treasure. You come to a fork in the road. Do you go left or right? left
You continue on the path and come across a river. The river is deep and wide. Do you try to swim across or look for a bridge? swim
You finally arrive at the treasure's location. You see a chest with a keyhole. Do you try to open the chest with your sword or the key you found earlier? sword
Once upon a time, there was a brave adventurer named john. john was 18 years old and was from beijing. john was a student and was known throughout the land for their bravery and quick thinking.

You chose left.

You chose swim.
john used their sword to try to open the chest, but it was too strong. john was never able to find the treasure and returned home empty-handed.
```

## Step 10:

```
Welcome to the Adventure Game!
Please answer the following questions to begin.
What is your name? smith
What is your age? 17
What is your gender? Male or Female? Male
What is your hometown? beijing
What is your occupation? engineer
You are on a quest to find a magical treasure. You come to a fork in the road. Do you go left or right? right
You continue on the path and come across a river. The river is deep and wide. Do you try to swim across or look for a bridge? bridge
You finally arrive at the treasure's location. You see a chest with a keyhole. Do you try to open the chest with your sword or the key you found earlier? earlier
Please enter a valid option.
You finally arrive at the treasure's location. You see a chest with a keyhole. Do you try to open the chest with your sword or the key you found earlier? chest
Please enter a valid option.
You finally arrive at the treasure's location. You see a chest with a keyhole. Do you try to open the chest with your sword or the key you found earlier? key
Once upon a time, there was a brave adventurer named smith. smith was 17 years old and was from beijing. smith was an engineer and was known throughout the land for their bravery and quick thinking.

You chose right.

You chose bridge.
smith used the key to open the chest and found the magical treasure inside. smith lived happily ever after with their newfound riches.
```