Introduction to the Text Adventure Game

COR 100.13 - Game Programming with Python (Lyon College '24)

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Session 1: Introduction to the Text Adventure Game

Objectives

- Understand text-based adventure games.
- Learn basic Python programming: variables, input/output, and conditionals.
- Implement the initial game setup with a simple storyline.

Introduction

A text-based adventure game is an interactive story where players make choices that affect the outcome. For example, "You are standing at a crossroads. You can go left or right. What do you choose?"

Basic Python Refresher

Variables and Data Types

```
name = 'Alice'  # String
age = 25        # Integer
print(f'{name} is {age} years old.')
```

Using these variables, write a `print` command with the output:

```
Alice is 25 years old.
```

Solution:

```
name = 'Alice'
age = 25
print(f'{name} is {age} years old.')
```

```
Alice is 25 years old.
```

Input and Output

The input function allows you to enter input. Use it to ask the user to Enter something, store the response in a variable $\text{user}_{\text{input}}$, and then tell the user what he entered.

```
user_input = input('Enter something: ')
print('You entered:', user_input)
```

Game Setup

Let's start coding a simple text-based adventure game. This is what the user will see:

1. You wake up in a dark forest.
2. There are two paths in front of you.
3. Pick the left or the right path.
4. The left path leads out.
5. The right path leads into a trap.

Let's code this:

```
print('You wake up in a dark forest.')
print('There are two paths in front of you.')
choice = input("Do you choose the 'left' path or the 'right' path? ")

if choice.lower() == 'left':
    print('You encounter a friendly squirrel who shows you the way out.')
elif choice.lower() == 'right':
    print('You fall into a trap! Game over.')
else:
    print('You hesitate and wander aimlessly. Try again.')
```

Improving the game

We're telling the user who picks neither left or right that he can "try again" but then we end the game. Not good! How can we fix that?

Answer: we need to wrap the action in an infinite loop. Then we need to allow a stubborn user, who keeps missing the point, to quit.

```
print('You wake up in a dark forest.')
print('There are two paths in front of you.')
while True:
    choice = input("Do you choose the 'left' path or the 'right' path? ")

    if choice.lower() == 'left':
        print('You encounter a friendly squirrel who shows you the way out.')
        break
    elif choice.lower() == 'right':
        print('You fall into a trap! Game over.')
        break
    else:
        print('You hesitate and wander aimlessly. Try again.')
        continue
```

So far so good. Now for adding a way out of the infinite loop:

```
print('You wake up in a dark forest.')
print('There are two paths in front of you.')
while True:
    choice = input("Do you choose the 'left' path or the 'right' path? ")

    if choice.lower() == 'left':
        print('You encounter a friendly squirrel who shows you the way out.')
        break
    elif choice.lower() == 'right':
        print('You fall into a trap! Game over.')
        break
    else:
        print("You hesitate and wander aimlessly. Try again (ENTER), or press 'q' to q
        if (input()=='q'): break
        continue
```

Challenge

Modify the game to add more choices or different outcomes. For example, include a third option or add a new scene if the player succeeds.

Challenge Sample Solution

This solution adds a third path ("middle") and a nested choice for entering a cave, creating a more interactive experience.

```
print('You wake up in a dark forest.')
print('There are two paths in front of you.')
while True:
    choice = input("Do you choose the 'left' path or the 'right' path? ")

    if choice.lower() == 'left':
        print('You encounter a friendly squirrel who shows you the way out.')
        break
    elif choice.lower() == 'right':
        print('You fall into a trap! Game over.')
        break
    elif choice.lower() == 'middle':
        print('You find a mysterious cave. Do you enter it?')
        cave_choice = input("Type 'yes' to enter the cave, or 'no' to turn back. ")

        if cave_choice.lower() == 'yes':
            print('Inside the cave, you discover hidden treasure! You win!')
            break
        else:
            print('You decide to play it safe and head back to where you started.')
            break
    else:
        print("You hesitate and wander aimlessly. Try again (ENTER), or press 'q' to q
        if (input()=='q'): break
        continue
```