Hyperion Development

Task: Beginner Control Structures - elif Statements

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Introduction

Welcome to The Beginner Control Structures - elif Statements Task!

In this task you will learn about a program's flow control. A control structure is a block of code that analyses variables and chooses a direction in which to go based on given parameters. In essence, it is a decision-making process in computing that determines how a computer responds when given certain conditions and/or parameters.

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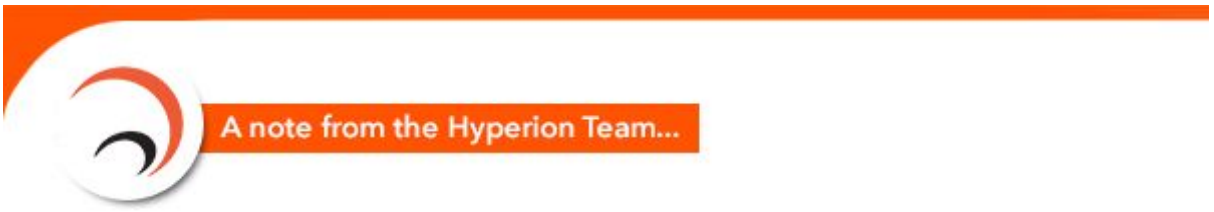
The best way to get help is to login to www.hyperiondev.com/support to start a chat with your mentor. You can also schedule a call or get support via email.

Your mentor is happy to offer you support that is tailored to your individual career or education needs. Do not hesitate to ask a question or for additional support!



One of the most respected positions in the the US and the UK right now is that of a software developer. Much of the 'Silicon Valley' culture has found its way out of San Francisco to dominate some of the best paying and most appealing careers in the West.

This is rapidly becoming the trend in South Africa, driven by the fact that software developers in the country are actually the highest paid in the world according to the 2016 StackOverflow Developer Survey.

That's right - it's not just the tiny percentage of software engineers hired by Google to work in Zurich or Mountain View that are making it big, but our own home-grown developers sitting under the shadow of Table Mountain or the Marine Parade of Durban beachfront.

But just how can I become a software engineer or software developer?

-The Hyperion Team

elif Statements:

The last piece of the puzzle when it comes to if statements is called an elif statement. This elif stands for Else If. What this does is give us more options in our scenarios so that it is not two dimensional. We can add more questions to the if statement so we can test multiple parameters in the same statement.

Look at the following example

```
num = 10

if (num < 12):
        print("the variable num is lower than 12")
else:
        print("the variable num is greater than 12")
```

What happens if we want to test multiple conditions? Well this is where elif comes in.

```
num = 10

if (num >12):
        print("the variable num is greater than 12")
elif (num > 10):
        print("the variable num is greater than 10")
elif (num < 5):
        print("the variable num is less than 5")
else:
        print("the variable num is 10")
```

Remember that you can combine if, else and elif into on big statement. This is what we refer to as a **Conditional Statement**.

Sorry for the interruption, but have you heard about the Margaret Hamilton? This is the woman and engineer who took us to the moon. She wrote the code for the Apollo 11's on-board flight software, and as a result of her work, she received NASA's Exceptional Space Act Award. If that's not enough, she is also credited with coining the term "software engineering". In the picture below you will see a young Margaret standing next to the actual code she wrote herself to take humanity to the moon

Margaret Hamilton

- **Masood Gool**

Instructions

Before you get started we strongly suggest you start using Notepad++ or IDLE to open all text files (.txt) and python files (.py). Do not use the normal Windows notepad as it will be much harder to read.

First read example.py, open it using Notepad++ (Right click the file and select 'Edit with Notepad++') or IDLE.

- example.py should help you understand some simple Python. Every task will have example code to help you get started. Make sure you read all of example.py and try your best to understand.

- You may run example.py to see the output. Feel free to write and run your own example code before doing the Task to become more comfortable with Python.

- You are not required to read the entirety of Additional Reading.pdf, it is purely for extra reference.

Compulsory Task

Follow these steps:

- Create a Python file called "Control.py" in this folder.

- This is going to expand on the first control structure task we created.

- Write code to take in a user's age using input() and store their age in an integer variable called age.

- Then check if the user's age is over 18. If the user is over 18, print out the message "You are old enough!" else if they are over 16 print "Almost there", otherwise print "You're just too young!" You should use one if, elif and else statement to do this.

Things to look out for:

1. Make sure that you have installed and setup all programs correctly. You have setup **Dropbox** correctly if you are reading this, but **Python or Notepad++** may not be installed correctly.
2. If you are not using Windows, please ask your mentor for alternative instructions.

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