Python Level 1 – Introduction to Python
Input/Output
Skill 1: Printing - Part A

```
print("Welcome to Python!")
```

Try:

```
print("What are \n these hacks?")

print("\t What is going on? :)")

print("SPAM" * 20)
```

Challenges:

A: Print out your favorite sport (to watch or play).

B: Print out a box like this:
```
* * * * * * * *
*             *
*             *
*             *
*             *
* * * * * * * *
```

C. Go to https://en.wikipedia.org/wiki/ASCII_art to learn more about ASCII art. Then, search on the internet to find some artwork. Get this artwork to print out using Python.
Practice Questions:
1. What does \n do?

2. What happens when you multiply a String by a number, as in:
print("Super!" * 100)?

Skill 2: Printing - Part B (Concatenation)

```python
print("Hello" + " What is this?")
```

Try:

```python
print("Banana " * 20 + "Orange you glad I didn't say banana?")

print("\t"*2 + "-.-.- " * 5 + "|||")
```

Challenges:

A: Print out your first and last name using a + sign to join them.

B: Turn your box (from Part A) into a sign, with your name in it.

Practice Questions:

1. What symbol is used to **concatenate** two Strings in Python?

2. Why is concatenation useful?

3. What is the result of running this code?
```python
print("You're amazing!" + " And the best!" + "And better than all the
rest!")
```

4. Why is there a space before the first "And" in the code above?

Skill 3: Variables

Circle the variables. Underline the **values**. Draw an arrow to the assignment operator.

What kind of data are these variables? Then type the code.

```
bugs = 10
colour = "Red"
like_cheese = False
fav_num = 54.3
```

Try:
```
print(bugs)
print("My favourite colour is " + colour)
print(like_cheese)
print(fav_num*10)
```

Challenges:

A: Change the values of the variables above. Run your program to make sure the Try statements still work.

B: If you do something like this:
```
shoe_sz = 8
print("My shoe size is " + shoe_sz)
```

You will get an error. To fix it, we must turn grade into a string, like this:
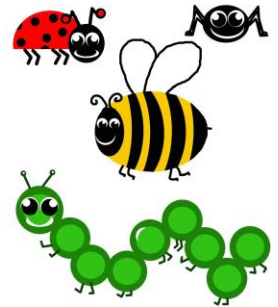```
print("My shoe size is " + str(shoe_sz))
```

C: Using this concept, create a variable for your age.  Then write a program to determine how many years it will be until you turn 100.  Hint: Use a math statement to make this automatic.

**Practice Questions:**

1. Name 4 types of data in Python.  Give an example for each.

2. Why do we use the `str()` function?

**Skill 4: Input**

```python
print("What is your name?")
name = input()
print("Hello!" + name)
```

Try:

```python
print("Enter the password:")
paswd = input()
if paswd == "secret123":
        print("Correct!")
else:
        print("Access Denied")
```

Practice Questions:

1. Why do we use the `input()` function in Python?

2. Why is it important to print a question before using `input()`?