

CS 141, Lecture 4

Data types

- Integers (int)
 - Whole numbers; may be negative.
- Floating point numbers (float)
 - Any number with a decimal point; may be negative.
- Strings
 - Any sequence of letters, numbers, or punctuation.
 - String literals are always surrounded by quotation marks.

Input from the keyboard

- Use a variation of a variable assignment:

- For integers:

```
variable = int(input("Prompt"))
```

- For floats:

```
variable = float(input("Prompt"))
```

- For strings:

```
variable = input("Prompt")
```

```
variable = input("Prompt")
```

- When Python sees an input statement, the program pauses.
- The "prompt" is displayed on the screen.
- The user types something at the keyboard.
 - What the user types must be of the right data type.
- After the user presses ENTER, whatever the user types is placed into the variable.
- Program continues on the next line.

Editing the burger program

Terminology

- A ***literal*** is a piece of data that you type directly into your program's code.
 - Ex: 6, 9.25, "Blah blah blah"
- A ***variable*** is a placeholder for a piece of data.
- Every literal and variable in a program has a data type.

Comments

- Lines that Python ignores completely.
- Used to tell a reader of your program what the program is doing.
- For any line that has a # sign, Python will ignore everything to the right of the #.

- Write a program that asks the user for
 - their hourly wage (a float),
 - how many hours they work per day (a float), and
 - how many days they work per week (an int).
 - The program should print their gross (before taxes) pay, as well as their net (after taxes) pay (deduct 15%).
- Write another program that lets the user input integers a , b , and c , then prints out the two solutions to the equation $ax^2 + bx + c = 0$.