Programming in Turing

What is programming?

A First Program in Turing

Computer Programming

"Programming" is creating a sequence of instructions to solve a particular program or accomplish a particular task.

Programming can be accomplished in many ways, such as:
    (1) drag-and-drop (Scratch)
    (2) typing commands (Turing)

The most common, and powerful, programming methods use typed commands (Java, C, C++, Python, etc.).

Your First Program in Turing

```
% a simple program
var name : string

put "What is your name?"
get name
put "Hello, ", name

% end of program
```

Your First Program in Turing

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% a simple program

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put "Hello, ", name


% end of program
```

- a comment starts with the % character
- they are ignored by the program
- they provide notes for the human programmer

Your First Program in Turing

```
% a simple program
var name : string


put "What is your name?"

get name

put "Hello, ", name


% end of program
```
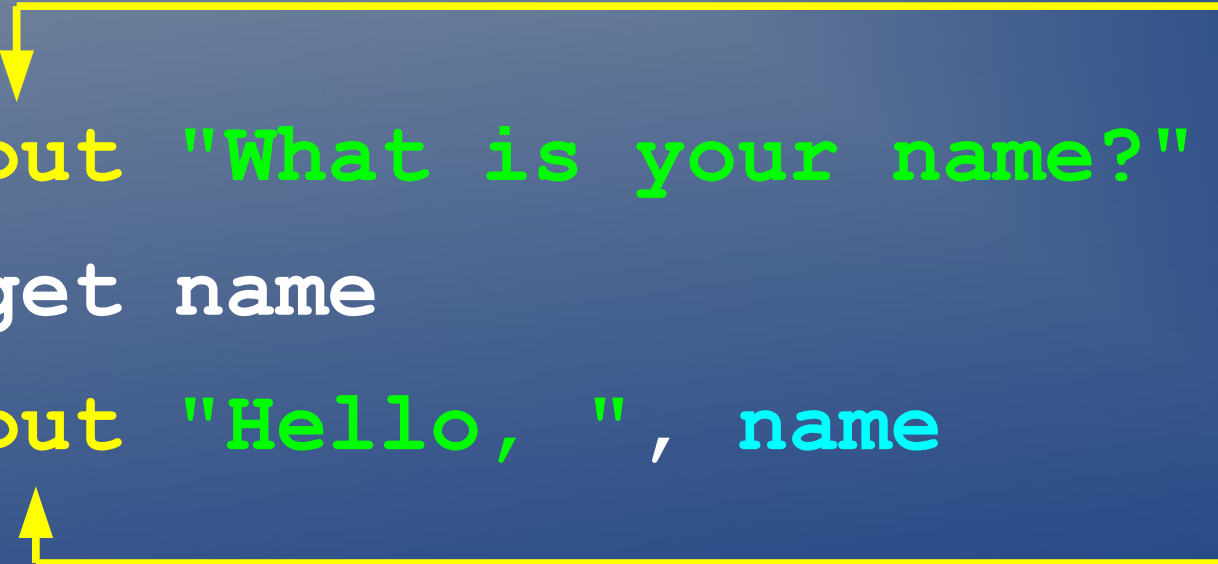
- a variable is used to save or store data

- there are different types of variables

- a string holds characters from the keyboard

Your First Program in Turing

```
% a simple program
var name : string

put "What is your name?"
get name
put "Hello, ", name

% end of program
```

- the "put" statement is used to output information to the screen
- can output messages in quotes
- can output variables

Your First Program in Turing

```
% a simple program
var name : string

put "What is your name?"
get name
put "Hello, ", name

% end of program
```

- a "get" command is used for input

- all input data must be stored in a variable

- different types of variables for different data

Where To Go From Here?

- now that you have a sample program, you can build your simple programs of your own

- as a new programmer (to Turing), it is usually a good idea to start with a copy of a working program, and then make changes

- use the program we just discussed and make some changes

    - how can you make it different?

    - what kind of changes produce errors?

    - experiment!

Where To Go From Here?

- explore basic concepts of input, output, and variables (there are video tutorials available)

- explore the processing of data:

    - calculations

    - decisions (if/else)

    - repetition (loops)

- more advanced topics at your own pace

    - all Turing lessons are available for your study

ICS3C and ICS3U

- the grade 11 courses focus heavily on programming

- this course, ICS2O, is NOT a prerequisite for ICS3C or ICS3U

- this unit, Programming in Turing, will provide you with some idea of whether or not you might find success and enjoy these courses

- ask me if you want to talk about whether or not these courses are right for you!