

Week_8

Trinity Coding4Kids

09/30/2024

Students, your typing is going good:

I want to encourage everyone to **keep practicing typing**.

Today we will start with a review, then learn about a computer coding process called flowcharting, then we will take a simple typing test, followed by a coding exercise.

Questions:

1. What is "Touch Typing"?
2. What finger does the [L] key get pressed with?
3. What finger does the [S] key get pressed with?
4. Where should your wrists be while typing?
5. What does proper typing "Posture" mean?
6. What is the #1 rule?
7. Tell me the keys on the "Home Row"?
8. What finger does the [F] key get pressed with ?
9. What finger does the [T] key get pressed with ?
10. What finger does the [J] key get pressed with?
11. What finger does the [U] key get pressed with?
12. What finger does the [O] key get pressed with?
13. What finger does the [E] key get pressed with?

Proper Keyboarding Techniques



- Sit up straight
- Feet flat on the floor
 - **Body Centered on the Letters G and H**
- Elbows bent at side
- Fingers curved and resting on Home Row Keys
 - **Thumbs resting at Spacebar**
- Eyes on your monitor

Our Goal is for each of you to increase your touch typing skill,
And gain confidence in your overall computer skills.

Today's class is about Computer Programming,
Specifically about flow charting.

First we need to know a little about a computer.
A Computer is a machine that can carry out commands.
Every computer has **memory**, that lets it store values.

Here is an example of the assignment operator:
"=" equals

Example:

```
J = J + 19;
```

```
J = (J + 1) / 3;
```

```
J = J + 3 - 2 + 7 - 5 + J;
```

```
X = 5
```

This means: create a memory location, we will use the name x to reference this memory location. Next store the integer 5 into this memory location.

`X = 5` is an example of a command for the computer to do this operation. Now let's do something else with this memory location called X.

```
X = X + 1
```

In this example the computer will look at the memory location "X" and see the contents of the location, then add 1 to that value, last store the new value to that location. Therefore `X = X + 1`; is the same as saying X <will be assigned with the value> 5 <the original value stored in the memory location X> + 1.

What value is stored in the memory location X ??

Very Good, an important part of coding is understanding what the computer is doing...

Next: let's look at this command

(JavaScript)

```
Var Y = 10;
```

```
Var Z = 3;
```

Now we know that memory location "Y" has the value 10, and memory location "Z" has the value 3 stored in them.

```
Var W = 0;
```

```
W = Y + Z;
```

What is the value stored in W ? 13

```
Var X = 0;
```

$X = W + Y + Z;$
 $(13) + (10) + (3);$

What is the value stored in X? 26

What is a Flowchart ?

A flowchart is a diagram that represents a series of steps to accomplish a task.

Flowcharts include:

- > Start & End points
- > command
- > process
- > condition
- > loop

Command- something the computer program will do

Process- something the computer program will collect as input or output, a process may be a series of commands

Condition - is a decision the computer needs to make. Often the results of the decision is True or False / Yes or No. Decisions are at the heart of computer programming.

Loop - is a way for the computer program to execute many commands for a pre-determined number of times; usually until a condition is true.

A **flowchart** is a type of diagram that represents a workflow or process. A flowchart can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows.

What a Flowchart is Used For?

Flowchart is a very versatile tool that can be used to:

- Document a process
- Present a solution
- Brainstorm an idea
- Design a system
- Explain a decision making process
- Store information

Next, lets take a simple typing test

Week_8_Beginner_Touch_Typing_Test ●



Students will take this beginner touch typing test and practice with their 4th & 5th fingers and the home row.

Test active | **Sep 30, 2024 - Oct 28, 2024**

Coding exercise,

We will continue the exercise we did last week:

1<https://studio.code.org/s/starwars>

"Hour of Code"

Star Wars



▶ Run

Instructions

"We need that scrap metal 🗑️. BB-8, can you get it?"



OK

Toolbox

- moveRight ()
- moveLeft ()
- moveUp ()
- moveDown ()

```
1 moveRight ();  
2
```