

## SheCodes Weekly Lessons

**VOCAB OF THE WEEK**

**VARIABLE**  
A container that a program uses to store and remember information. Variables can hold numbers, words, and even whether something is true or false.

**SYNTAX**  
Syntax in computer programming means the rules that control the structure of the symbols, punctuation, and words of a programming language.

**FUNCTION**  
A list of steps in a program that are all wrapped up together, like a math problem. When you give information, or "input" to the function, the function processes the information and gives you back an answer, or an "output".

**LIBRARY**  
A programming library is a collection of prewritten code that programmers can use to make coding tasks simpler.

*Don't go over the line another week!*

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**Week 4:**  
**Functions and Global/Local Variables**  
Mai Hoang & Reem Alkhalily

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<b>04</b>	<b>FUNCTIONS</b> A set of instructions that does a task	<b>LOOPS</b> Repeating something over and over until conditions are met

**Let's Play a Game!**

We are all moving to a desert island, and we must come up with the rules for our new society...

**Parts of a For Loop**

There are three parts of a for loop

**✓ LOOP VARIABLE**  
This can be any variable you choose, and is placed right after the word "for".

**✓ LOOP BODY**  
This tells us exactly what the for loop is going to do.

**✓ TERMINATING CONDITION**  
This is the condition that must be met for the for loop to end.



SheCodes students, teachers, parents, and sponsor uniting during the End-of-Year celebration at University of Houston in front of the Cullen Performance Hall.

### What We Do

We are thrilled to share the success story of SheCodes, a program that is changing the face of computer science education for girls starting in the 5th-6th grade. SheCodes relies on the dedication and expertise of volunteer teachers who have a personal drive to help bridge the gender gap in tech.

Through a comprehensive 8-week curriculum, the program teaches students the fundamentals of coding using Python. The classes take place every week on Fridays and Saturdays, with teachers providing live instruction via Microsoft Teams.

The program is designed to provide a supportive and engaging learning environment for students. Each class is led by a volunteer teacher who has a passion for computer science and wants to inspire the next generation of women in tech.

But the learning doesn't stop there. SheCodes also provides office hours for students who need extra help or support. This allows students to ask questions and get individualized attention from their teachers. The office hours are a valuable resource for students who want to take their coding skills to the next level.

### The Heart of Our Work

Many of the SheCodes volunteers have been inspired to teach by their own experiences of being women in the tech industry. They know all too well what it is like to not have female role models to look up to or to feel like they don't belong in a male-dominated field.

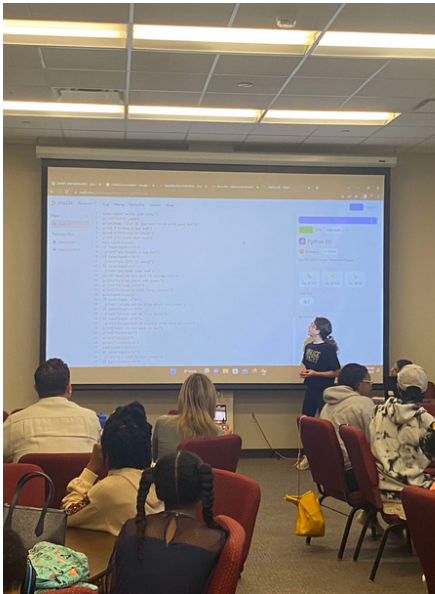
*"We are passionate about giving young girls the support and encouragement we wish we had received when we were starting out."*

In addition to the lack of representation, another issue that drives SheCodes volunteers is the lack of computer science classes offered in middle and high schools. Many of these volunteers are aware of how valuable it would have been to have access to computer science classes when they were in school. They know that computer science skills are in high demand and that these skills can open up a world of career opportunities.

That's why the SheCodes program is so important. It is providing young girls with the tools they need to pursue a career in tech, regardless of whether or not their schools offer computer science classes.

By introducing girls to computer science topics and teaching them how to code using Python, SheCodes is opening doors and creating opportunities for girls who might not have otherwise had access to this kind of education.





Students Eva Chapa and Kaitlynn Gonzalez presenting their projects at the celebration in front of parents and teachers.

## The Final Project

In addition to attending weekly coding classes and receiving personalized help during office hours, the students in SheCodes are given a unique opportunity to apply what they've learned by creating a final project.

At the end of the semester, students combine their newfound coding skills with their creativity to produce a final project resembling a choose-your-own adventure book. This project is a culmination of their hard work and dedication throughout the program.

Students have the liberty to generate their own creative ideas and devise a decision tree to help map out the steps for their stories. For instance, Student Eva Chapa fashioned a narrative about her morning routine, encompassing choices such as tidying her bed, selecting her footwear, and picking breakfast items.



## The End-of-Year Celebration



Students receiving their certificates at the end of their course along with their teachers.



Winners of the Coding and Vocab Kahoot contest, (left to right) Jamille Bell, Hailey Harris, and Ava Phillips.

After weeks of virtual learning, SheCodes invites students and teachers to come together for a party. This celebration is a chance for everyone to unwind, have fun, and connect with each other in person. The event is filled with games, food, and laughter as everyone celebrates the hard work and dedication of the students.

One of the most exciting parts of the celebration is the prize-giving ceremony. Students are recognized for their accomplishments and given prizes to celebrate their success. These prizes are a tangible reminder of the students' hard work and dedication throughout the semester.

But the celebration doesn't end there. SheCodes also provides a tour of the university campus to students and parents. This tour is a valuable opportunity for students to explore the campus and get a sense of what college life is like. For many students, this is the first time they have been on a college campus, and the experience can be both exciting and inspiring.

As the students and parents tour the campus, they learn about the different programs and opportunities available to them. They see the labs, classrooms, and dorms that make up the university and begin to imagine themselves as college students. This is a powerful experience that can help to motivate and inspire students to pursue their dreams.

## Our Outlook

Thanks to the tireless efforts of the SheCodes coordinators and volunteers, many girls have been introduced to the world of computer science in a way that is accessible and engaging. They have been empowered to explore their creativity and develop skills that will be valuable to them throughout their lives. Together, we can empower the next generation of women in tech and create a more equitable and inclusive future for all.

