# Intro to Computing in Python

Program overview and requirements (Gr. 8-12; Fall 2023)

## Description

**Introduction to Computing in Python** is a series of seven online workshops that run from 10-11:30 am every Saturday between Oct 14-Dec 2, 2023 (except for the Nov 11 long weekends). In this workshop series, Grade 8-12 students will learn what computer science and computer programming is about. They will also use fundamental programming concepts such as variables, data types, comparison and logical operators, control structures, and functions to create useful programs. This workshop series will be taught using the Python programming language. There will be a show-and-tell session during the final workshop, in which students will present their work to their peers and celebrate their accomplishments. All workshops will be offered virtually via Zoom.

## Important notes (please read before signing up)

- There are limited spots available in this program because we want to ensure that every student receives the support necessary to maximize their experience in this program. **Please do not sign up if you know you will miss more than one workshop in this 7-week program.** We offer various one-off workshops that you can sign up for instead: https://sciencealive.ca/hour-of-code
- Students will receive a certificate of completion at the end of this program. However, attendance of 6 out of 7 workshops is required to receive a certificate of completion.
- If you sign up and do not wish to attend the program, please give us at least one-week notice so we can fill the spot with students from the waitlist.
- Please be respectful of these guidelines so that we can continue to offer such programs at no cost.

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## Program schedule

| Date and time | Workshop description |
|---|---|
| Oct 14 (Sat)<br>10:00-11:30 am | Python Basics #1 |
| Oct 21 (Sat)<br>10:00-11:30 am | Python Basics #2 |
| Oct 28 (Sat)<br>10:00-11:30 am | Python Basics #3 |
| Nov 4 (Sat)<br>10:00-11:30 am | Turtle Graphics #4 |
| Nov 11 (Sat) | *Long weekend break. No workshop.* |
| Nov 18 (Sat)<br>10:00-11:30 am | Turtle Graphics #5 |
| Nov 25 (Sat)<br>10:00-11:30 am | Project wrap-up & presentation preparation |
| Dec 2 (Sat)<br>10:00-11:30 am | Show-and-tell and graduation ceremony<br>*You must attend 6 out of 7 workshops to receive a certificate of completion. |

## Additional information

- This workshop series will cover fundamental programming concepts such as variables, data types, comparison and logical operators, control structures, and functions. The progress of covering the concepts above will depend on the pace of the class.
- Meeting links will be open at 9:30 am, which is 30 minutes before the start time, for students who wish to test their setup (e.g. is my audio working?).
- Students can join the workshops at 9:30 am, which is 30 minutes before the start time, and/or instructor office hours (11:30 am-12:30 pm after each workshop) to ask questions and get feedback about their code.
- Family members and friends are welcomed to join the final presentation.

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## Workshop requirements

- Internet access
- Laptop/Desktop computer
- Replit account: You can sign up here https://replit.com/login
- An up-to-date web browser.
  - Use this link to check your browser version https://www.whatismybrowser.com/

## Sign-up link

https://websurvey.sfu.ca/survey/455385061

The deadline to sign up is Oct 9 (Monday) at 11:59 pm. A confirmation email with the Zoom link will be sent to students by Oct 10 (Tuesday) at 5:00 pm.

## Pre-workshop setup

1. Sign up for a Replit account.
2. You will be added to the **Intro to Computing FALL 2023** team on Replit.
3. Join the **Intro to Computing FALL 2023** team. You should receive an email that prompts you to join the team (see below).

Hi ▮▮▮▮▮▮

You have been invited to join "**Intro to Computing FALL 2022**" on **Replit**.

**Join Intro To Computing FALL 2022**

**Replit** is the easiest way to get start with programming. It's a cloud coding environment for all major programming languages and a platform for teaching and learning programming.
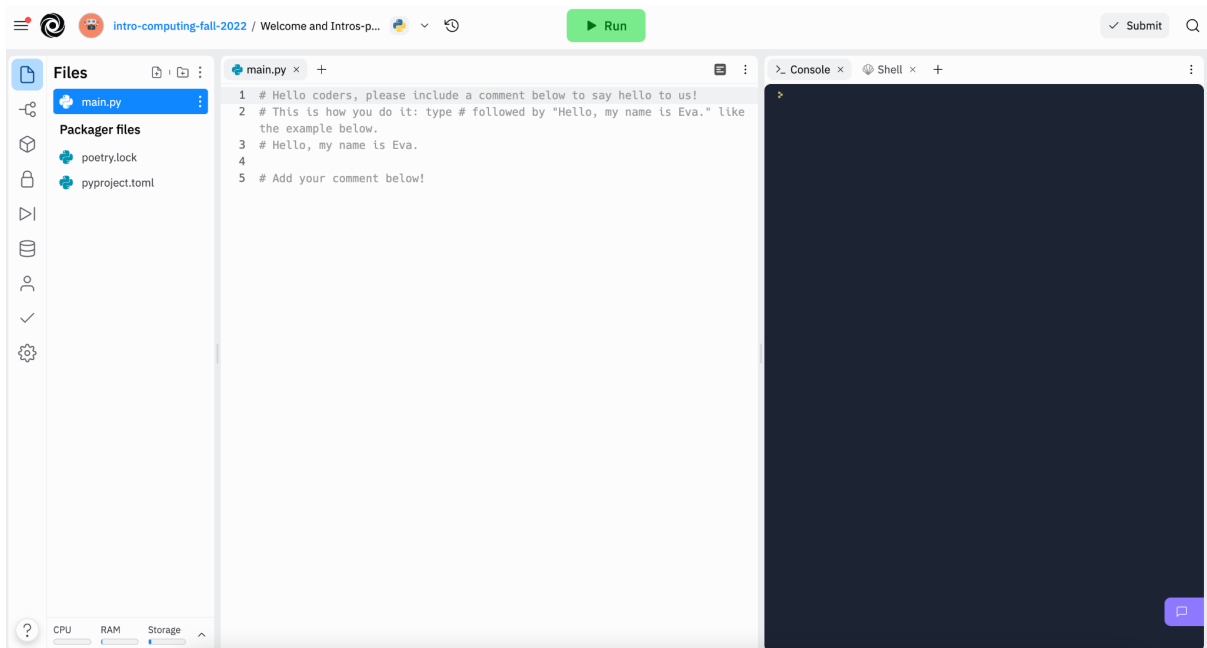
Happy hacking!
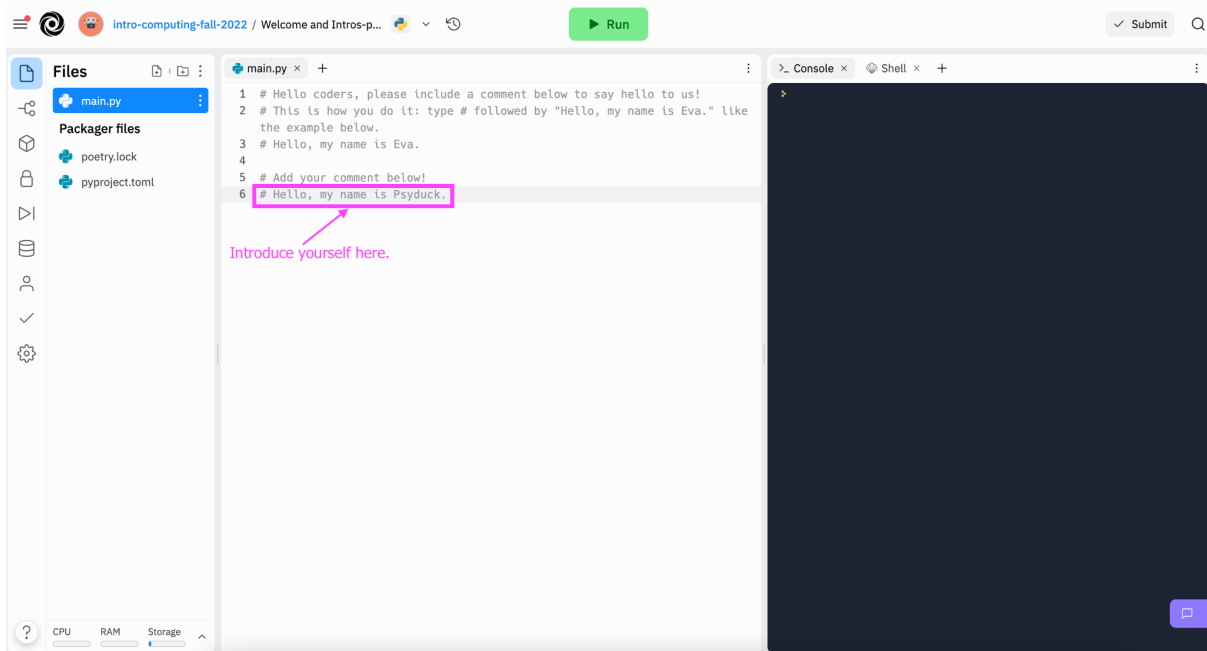
4. Make sure you are logged into your Replit account.

5.  If you are, you will see the screenshot below once you join the team. Click on the **Welcome and Intros** project.
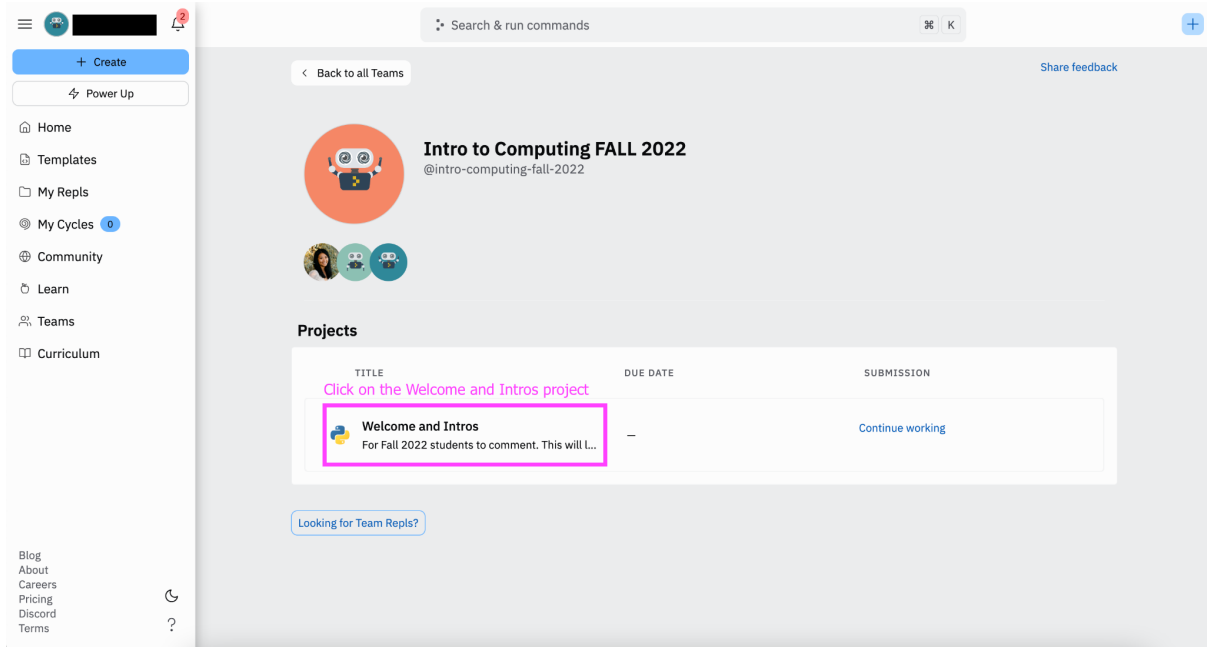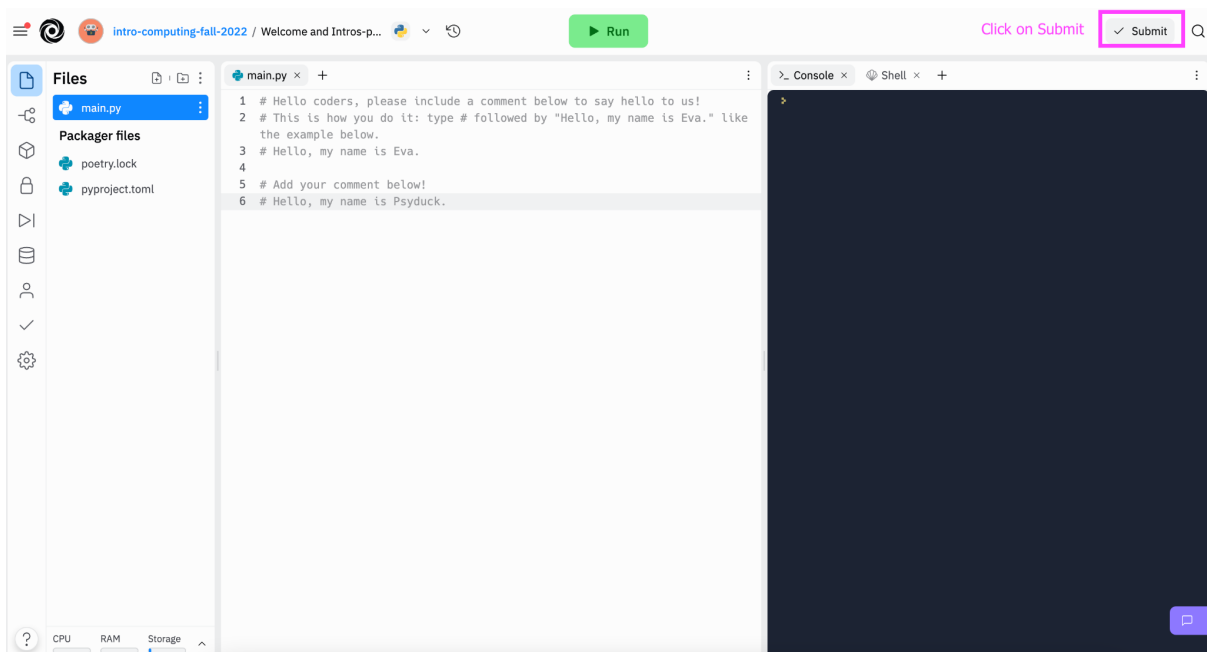


6.  The main.py file will open by default and there are some instructions in the file.

7. Follow the instructions and add **# Hello, my name is [insert your name].**



8. Click on **Submit** and you are done. See you in class!

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## Virtual Community Guidelines

Welcome to the Intro to Computing in Python program offered virtually by the SFU Applied Sciences Outreach! We are so excited that you have decided to join us. Our mission is to inspire, encourage, and support youths of all backgrounds to explore the many topics related to science, engineering, and technology through interactive and engaging activities. Before you join us, there are some guidelines we need everyone to follow to maintain the safety of everyone involved. See below for our Virtual Community Guidelines.

**Personal Safety:** We take safety seriously. If harm is disclosed or discussed (harm to self, or harming others) then we will take the appropriate steps to ensure your continued safety and the safety of those around you. Threats about others personal safety will not be tolerated.

**Respect:** Treat those online as you would treat them in-person that is with respect, dignity, and care.

**No Hate Speech or Bullying:** Bullying, discrimination, and harassment of any kind will not be tolerated.

**Communication:** Communication is encouraged in this workshop. Communicate with respect and listen to others when they speak or share ideas, which includes when sharing ideas out loud or via the chat function. Mute your microphone when not speaking and only turn your video on if you feel comfortable to do so.

**Privacy:** Respect the privacy and personal information of those in the shared virtual space by not sharing information that is not your own. Respect your own privacy by not sharing any personal information with those you do not know. Sharing of the Zoom link with those outside of the specific intended group is strictly prohibited.

**Copyright:** There will be no recording of anything that happens in this space, which includes participants and instructors taking pictures, recording parts of the workshop or recording their screen during any part of the workshop.

By joining the Introduction to Computing I program, you are considered to be in agreement with the above community guidelines. We will take the appropriate actions if any of the above guidelines are violated. Depending on the situation, this may result in revoking participation in the remaining workshops. Thank you in advance for your commitment to keeping our programs engaging, safe and of course, fun!

## Meet your instructors



**Alyssa** is a fourth year Computing Science student at Simon Fraser University. She began programming in high school and has been passionate about coding ever since. At SFU, Alyssa is a peer mentor for the TechConnect program, an Applied Science student ambassador, and a member of her scholarship student committee. In her spare time, Alyssa enjoys many outdoor activities such as kayaking, hiking, and cross country skiing.



**Danny** is a tutor, instructor, and fourth year Computer Engineering student at SFU. He is passionate about coding and frequently spends time working on personal projects with the goal of honing his own skills while aiming to develop applications that create convenience for others. He has worked as a swimming instructor since 2016 and values creating engaging learning environments for youth. This, coupled with his knowledge as a Computing Science Peer Tutor, and having experienced both the triumphs and tribulations that come with being a student in STEM, he aims to help fellow undergraduates and youth develop crucial skills needed to succeed in computer science. In his spare time, he enjoys watching documentaries and gaming with friends.

**Sunil** is a student and former sports coach. He is currently studying Computer Science at SFU for a Bachelor of Science degree. During this time he has found enjoyment from making various projects through programming in both his school and free time. From 2017 to 2019, he volunteered with the YMCA and coached youth basketball. In his free time, Sunil enjoys collecting comic books, playing video games with friends and playing sports such as hockey.

## Contact

If you have questions, please do not hesitate to contact cancode_prog@sfu.ca.