

LAB 8 – RepoLeaf Classes

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COMP-232: Programming Languages
California State University, Channel Islands

October 16, 2024

Hard Due Date: October 23, 2024

Congratulations! You are the first class in the world to use RepoLeaf Classes! RepoLeaf Classes lets students submit and professors to grade programs.

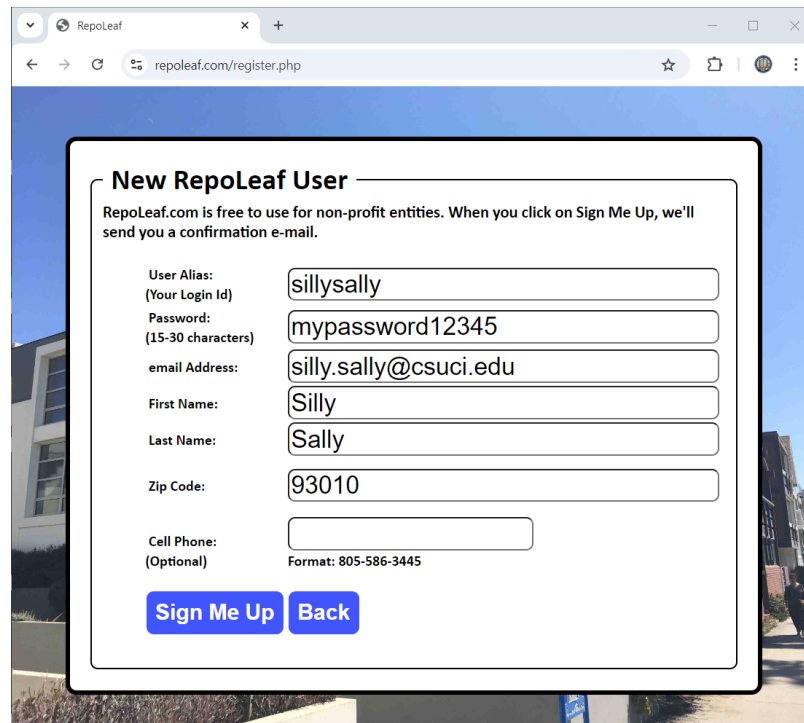
In this assignment, we will:

1. Sign up for a RepoLeaf account.
2. Write a short program.
3. Submit your program using RepoLeaf Classes.

Sign up for RepoLeaf

To sign up for RepoLeaf:

1. Visit <https://repoleaf.com>
2. Click on the **Let's Code** button.
3. Click on the **Create Account** link.
4. Click on the **Create Account** button. The **New RepoLeaf User** page is displayed.

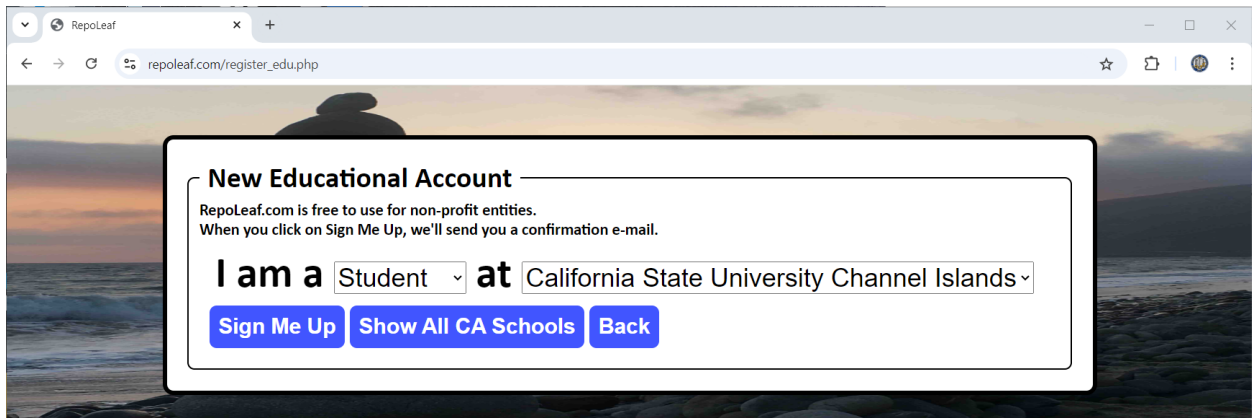


The screenshot shows a web browser window with the URL `repoleaf.com/register.php`. The main content is a registration form titled "New RepoLeaf User". The form includes a disclaimer: "RepoLeaf.com is free to use for non-profit entities. When you click on Sign Me Up, we'll send you a confirmation e-mail." Below this, there are several input fields: "User Alias: (Your Login Id)" with the value "sillysally", "Password: (15-30 characters)" with "mypassword12345", "email Address:" with "silly.sally@csuci.edu", "First Name:" with "Silly", "Last Name:" with "Sally", and "Zip Code:" with "93010". There is also an empty "Cell Phone: (Optional)" field with a note "Format: 805-586-3445". At the bottom of the form are two buttons: "Sign Me Up" and "Back".

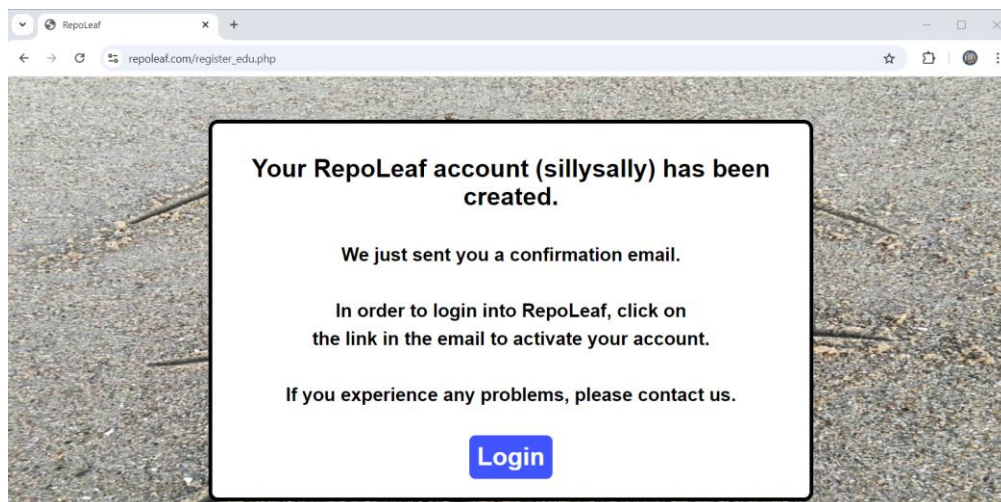
5. Enter:

1. Your user alias. This is your login id into RepoLeaf and can be anything you like.
2. Password. Passwords need to be 15 to 30 characters long.
3. Your email address. To use RepoLeaf Classes, your email needs to end in .edu, so use your csuci.edu email account. Your professor can add you to their class using your RepoLeaf user alias if you don't have an email account ending in .edu.
4. First Name
5. Last Name
6. Zip Code of where you live.
7. Cell Phone. You **do not** need to provide your cell phone number.
8. Click on **Sign Me Up** button once form is completed.

If you used your .edu email account, you will see **New Educational Account**. Here you would confirm that you are a Student at California State University Channel Islands.

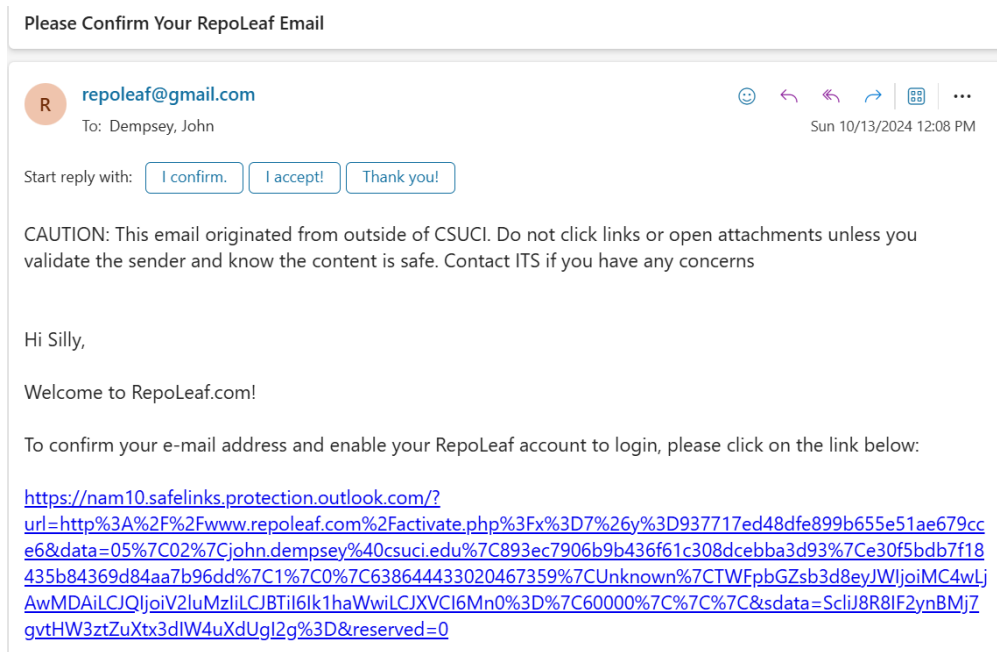


Based on your zip code, RepoLeaf lists the schools in your area. If Channel Islands isn't listed, you can click on **Show All CA Schools** button to display all schools in California. Click on the **Sign Me Up** button.

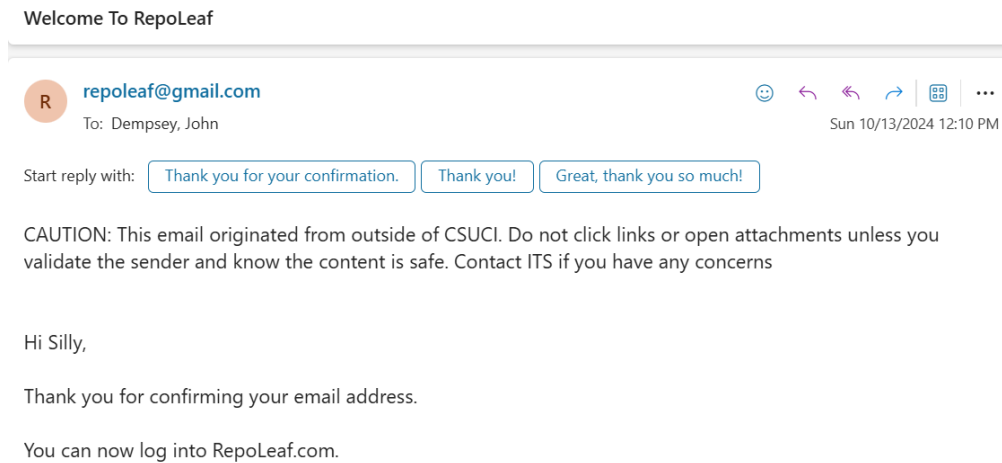


RepoLeaf will send you an email to confirm your email address is valid.

Click on the long URL link below to confirm your email address.



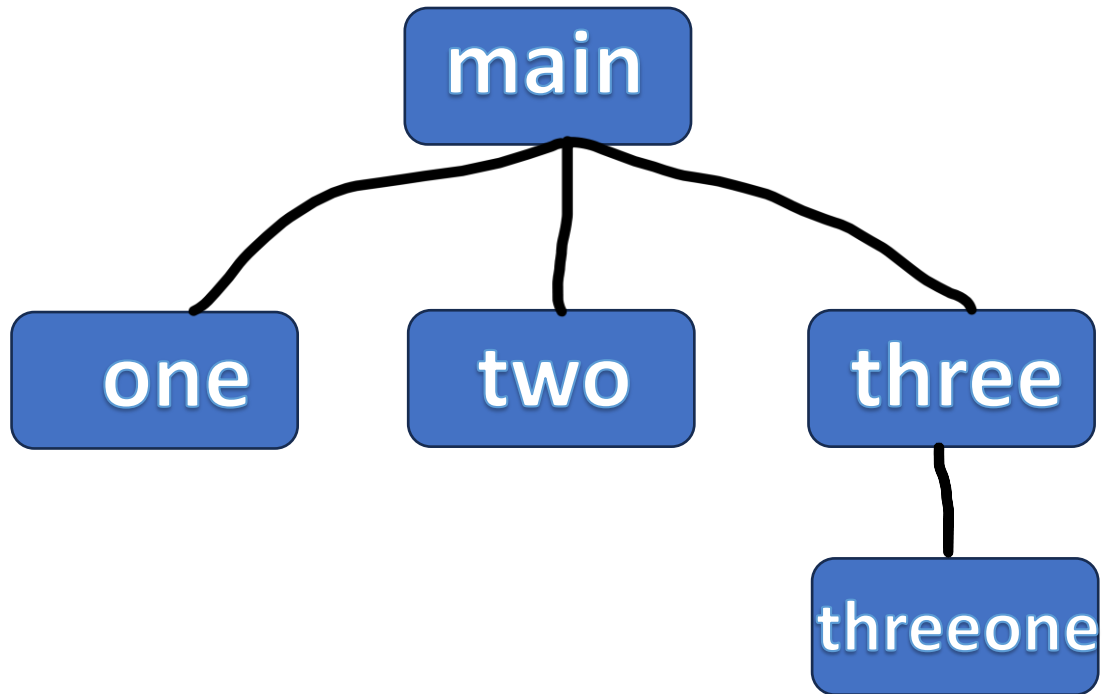
After clicking the above link, RepoLeaf will email you with:



You can now log into RepoLeaf using your alias and password.

Write a Short Program

We will write an easy program. The program will consist of four modules: main.c, one.c, two.c, three.c, and threone.c. The calling structure follows:



The main program will print out “Hello RepoLeaf!” and then call functions one, two, and three, where function three calls threone, to generate the following output:

```
Hello RepoLeaf!  
one  
two  
three  
threone
```

After logging into RepoLeaf, you will see the Projects Menu.

Click on the **Add Program** button.

RepoLeaf

repoleaf.com/new_program_menu.php

Home Menu Help Logout Search...

New Program

Program Name:

Program Root Filename:

Program Language: Enter language suffix, e.g. c. ACE supports 140 languages.

Viewpath Alias: Leave viewpath alias blank unless your admin has given you an alias.

Save New Program Back

For Program Name, enter: **Testing RepoLeaf Classes**

For Program Root Filename, you can enter: **testrepoleaf**

For Program Language, you would enter: **c**

Viewpath Alias should be left blank.

Click on the **Save New Program** button.

Next click on **Testing RepoLeaf Classes (testrepoleaf)** button in the Projects Menu.

Type in your main.c program to print “Hello RepoLeaf!” and call functions one, two, and three. (The contents of main.c can be seen below.) You’ll need to define prototypes, like: void one();, in main.c.

Click the **Save Changes/Compile** to save your changes to main.c.

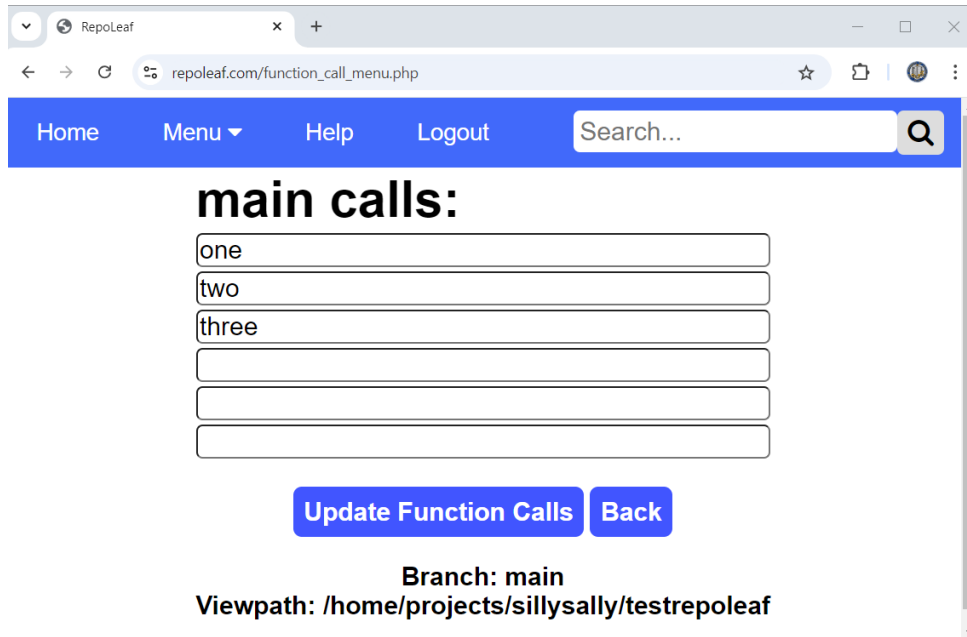
Click the **Back** button.

Next click on the **New Function** button to add one.c. Filename is one. Function Name can be one. Description can be “This is one.” Write code for the one() function which prints “one”.

When done, click **Save Changes** button.

Repeat for functions two.c, three.c, and threec.c.

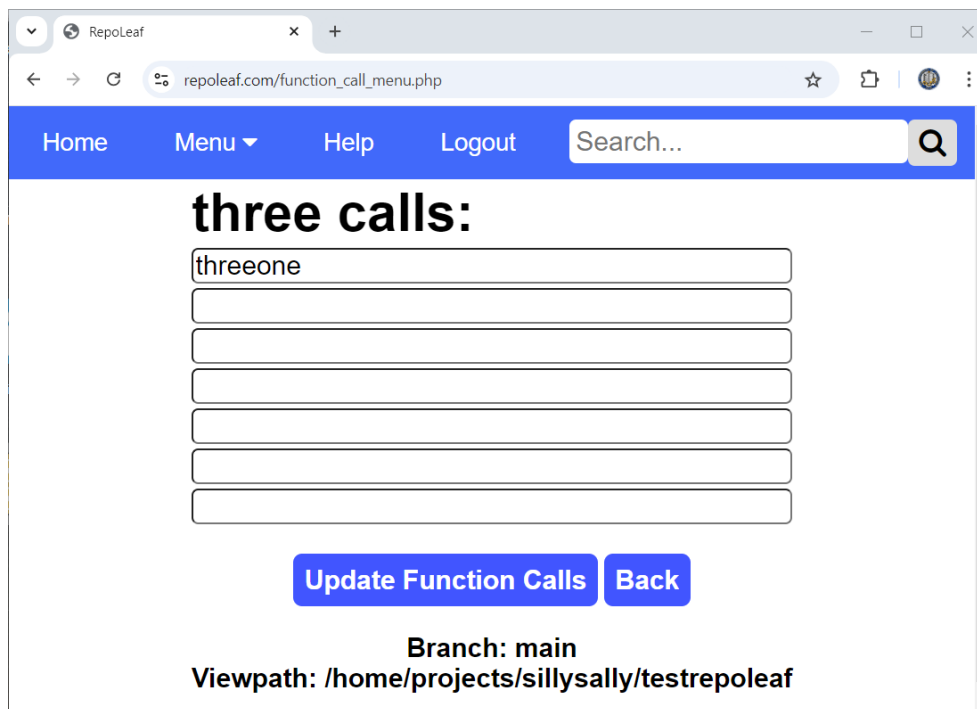
Next to define the calling structure, click on the bottom-right **Calls** button when displaying main.c. (There are actually two Calls buttons displayed.)



Enter one, two, and three. Click on the **Update Function Calls** button.

Click on the **three (three.c)** button on the left-hand side to display three function.

Click on the bottom-right **Calls** button to add:



To view the calling structure of your program, click on the top-left **Calls** button to display the calling structure, as seen below.

The screenshot shows the RepoLeaf web editor interface. At the top, there is a navigation bar with 'Home', 'Menu', 'Help', and 'Logout' links, and a search bar. Below the navigation bar, there is a 'Calls' section on the left with a tree view showing the function 'main (testrepoleaf.c)' and its calls to 'one', 'three', 'threeone', and 'two'. The main area displays the source code for the 'main' function, which includes a header file and calls to 'one()', 'two()', and 'three()'. The code is as follows:

```
1 #include <stdio.h>
2
3 void one();
4 void two();
5 void three();
6
7 int main()
8 {
9     printf("Hello RepoLeaf!\n");
10    one();
11    two();
12    three();
13 }
```

Below the code editor, there are several buttons: 'Save Changes/Compile', 'Run', 'New Function', 'Calls', 'Print Screen', 'Print Code', 'Runo', 'New File', and 'Back'. On the right side of the code editor, there is a vertical toolbar with buttons for 'Action', 'Desc', 'I/O', 'CR', 'CM', 'Test', 'Doc', 'Set', 'Import', and 'To Do'. At the bottom of the interface, it shows 'Branch: main' and 'Viewpath: /home/projects/sillysally/testrepoleaf'.

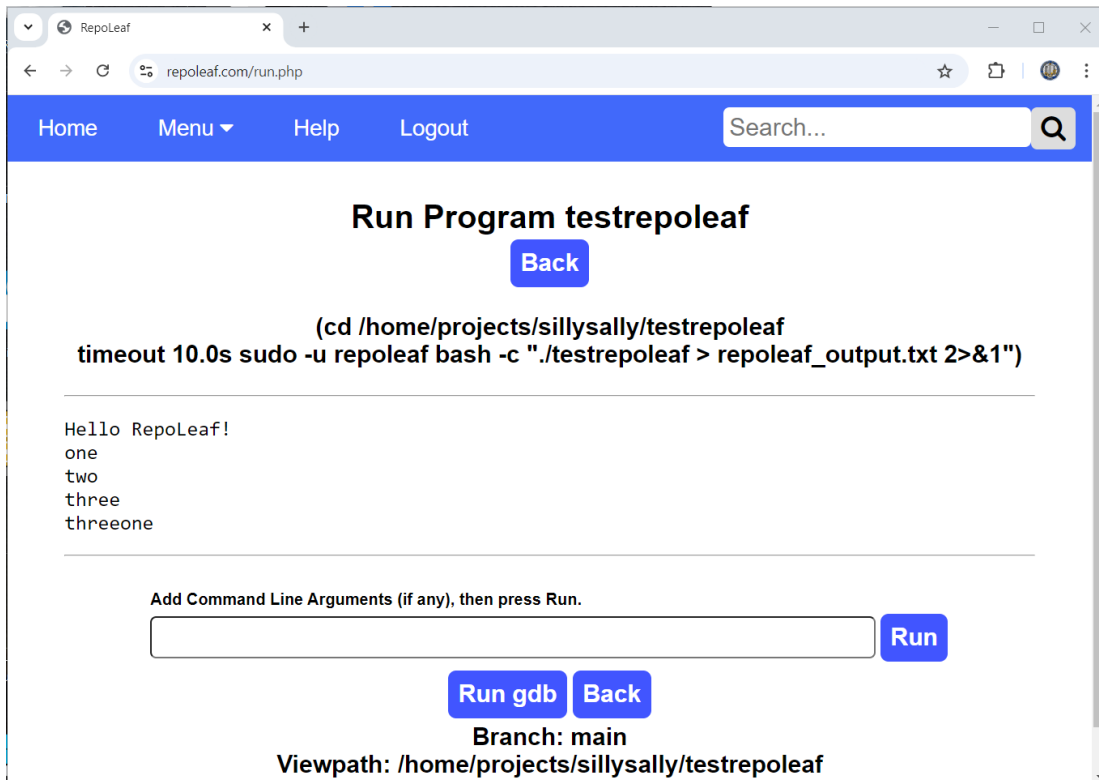
We're now ready to compile your program.

Click on **Save Changes/Compile** button.

Click on **Compile** button.

Fix any errors. If there are no errors, click on **Runo**. Runo says Run No Parameters.

If everything goes well, Runo will display the output we expect, as seen below.



The above program is the minimum to receive full credit.

Feel free to add more modules or try out the following features:

Action – Adds/edits meeting minutes and action items to work on.

Desc – Write a description of the function currently displayed. Used by Reports.

I/O – Define the inputs/outputs for every function.

CR – Keep track of change requests.

CM – Configuration Management using git and github.com.

Test – Run one or more test cases. Compare actual with expected results.

Doc – Generate and print customized HTML reports.

Set – Configure your RepoLeaf environment, e.g., compilers and switch to dark mode.

Import – Copy existing program files into RepoLeaf.

To Do – Keep track of your personal “to do” list.

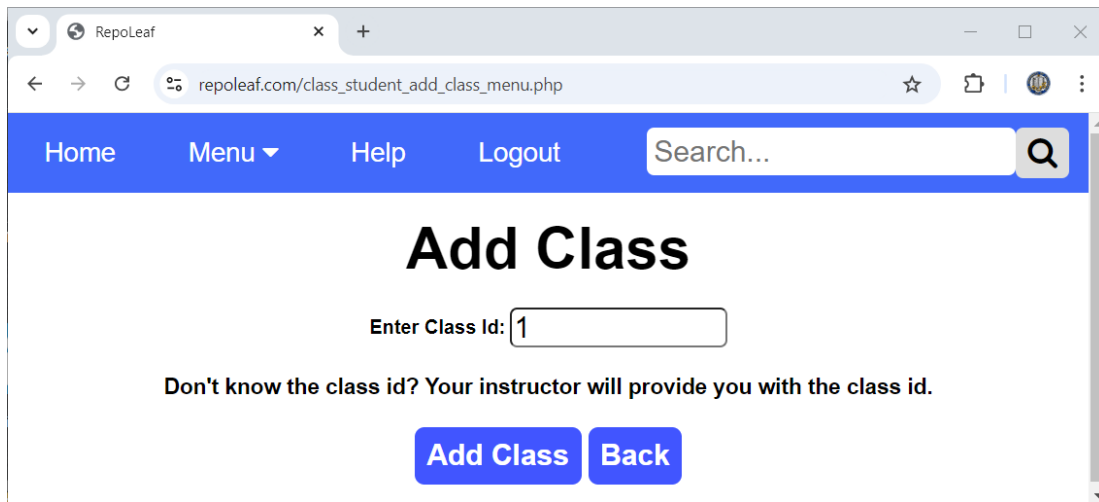
Submit your program using RepoLeaf Classes

Now that we have completed the assignment, it's time to turn in your work using RepoLeaf Classes.

You can click on the **Home** button or **Back** buttons to reach the Projects Menu.

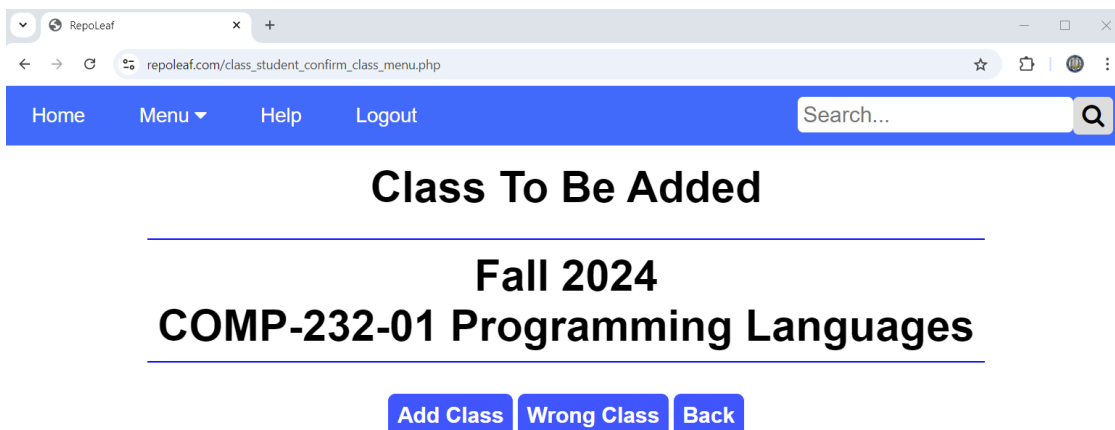
Here you can click on the **Classes** button.

Click on the **Add Class** button.



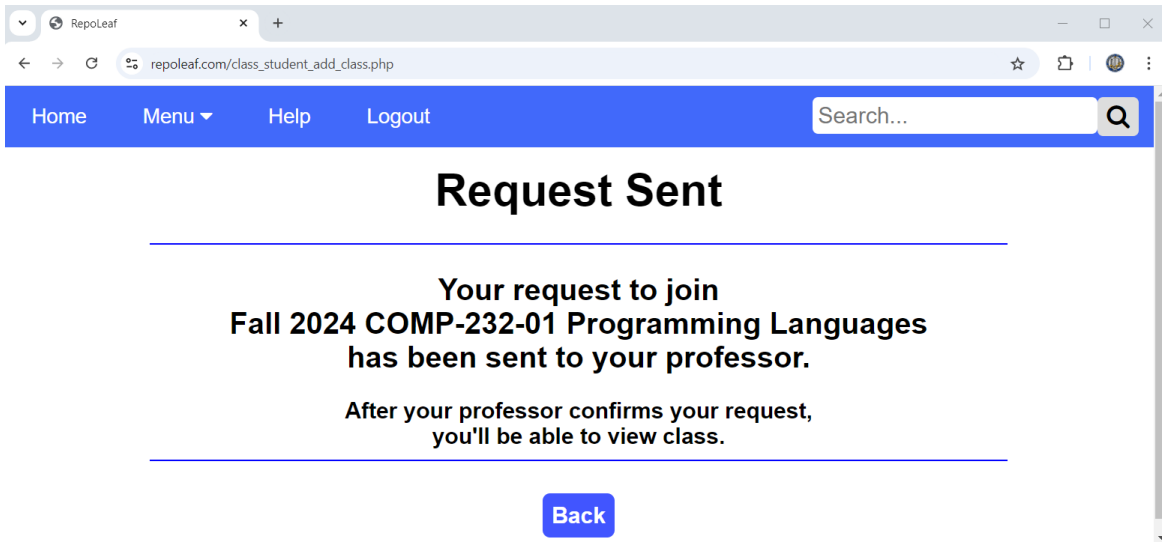
Being we are the very first class ever to use RepoLeaf Classes, your Class Id is the number 1. Enter number 1 for Class Id and then click on the **Add Class** button. You can use Class Id 2 for testing RepoLeaf Classes.

RepoLeaf will ask that you confirm the class displayed is the class you want to be added to.

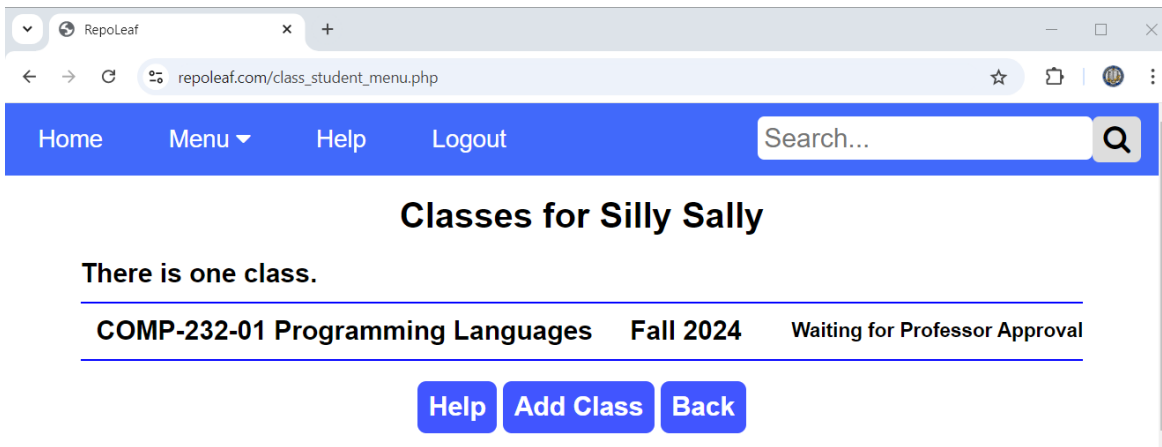


After clicking **Add Class**, your instructor will confirm your request.
You will then see the class in your list of classes.

To confirm, click on the **Add Class** button.



Your request to join the class has been sent and is now awaiting your professor's approval.



When your professor has added you to the class, you should receive an email.

Once added to the class, you can now turn in your programs.

Click on the **Classes** button in the Project Menu.

Click on the **Edit Class** button for COMP-232 class.

Ignore previous assignments and locate **LAB 8 – RepoLeaf Classes**.

Click on the **Submit Assignment** button for **LAB 8 – RepoLeaf Classes**.

For Program Root Filename, you would enter **testrepoleaf**, as seen below.

RepoLeaf New Tab
repoleaf.com/class_student_submit_assignment_menu.php

Home Menu Help Logout Search...

COMP-232-01 Programming Languages Fall 2024

Assignment Name: LAB 8 - RepoLeaf Classes

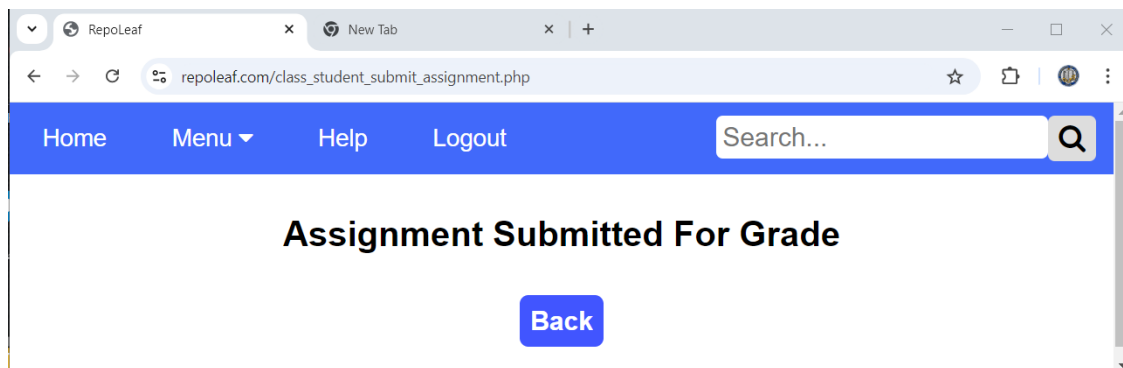
Date Due: 10/23/2024

Student Comments: Optional

Program Root Filename: testrepoleaf Need to enter your project root filename.

[Submit Assignment](#) [Help](#) [Back](#)

Click on the **Submit Assignment** button.



You're done! Your professor can now grade your assignment.

Your professor can now view, compile, run, grade, and provide you with any comments on your source code. Below is the teacher's view of your program.

Calls **Hide Calls**

- main (testrepoleaf.c) x
- one (one.c) x
- three (three.c) x
- threeone (threeone.c) x
- two (two.c) x

Function Name:

Description:

Source Code: testrepoleaf.c ^F=Find

```

1 #include <stdio.h>
2
3 void one();
4 void two();
5 void three();
6
7 int main()
8 {
9     printf("Hello RepoLeaf!\n");
10    one();
11    two();
12    three();
13 }
```

Action

Desc

I/O

CR

CM

Test

Doc

Set

Import

To Do

Save Changes/Compile

Run

New Function

Calls

Print Screen

Print Code

Runo

New File

Back

Last Run:

```

(cd /home/projects/sillysally/testrepoleaf
timeout 10.0s sudo -u repoleaf bash -c ".testrepoleaf > repoleaf_output.txt 2>&1")
Hello RepoLeaf!
one
two
three
threeone
```

Branch: main
Viewpath: /home/projects/sillysally/testrepoleaf

COMP-232-01 Programming Languages Fall 2024

Assignment Name:

Program Root Filename:

Date Submitted: Date Due: Submitted:

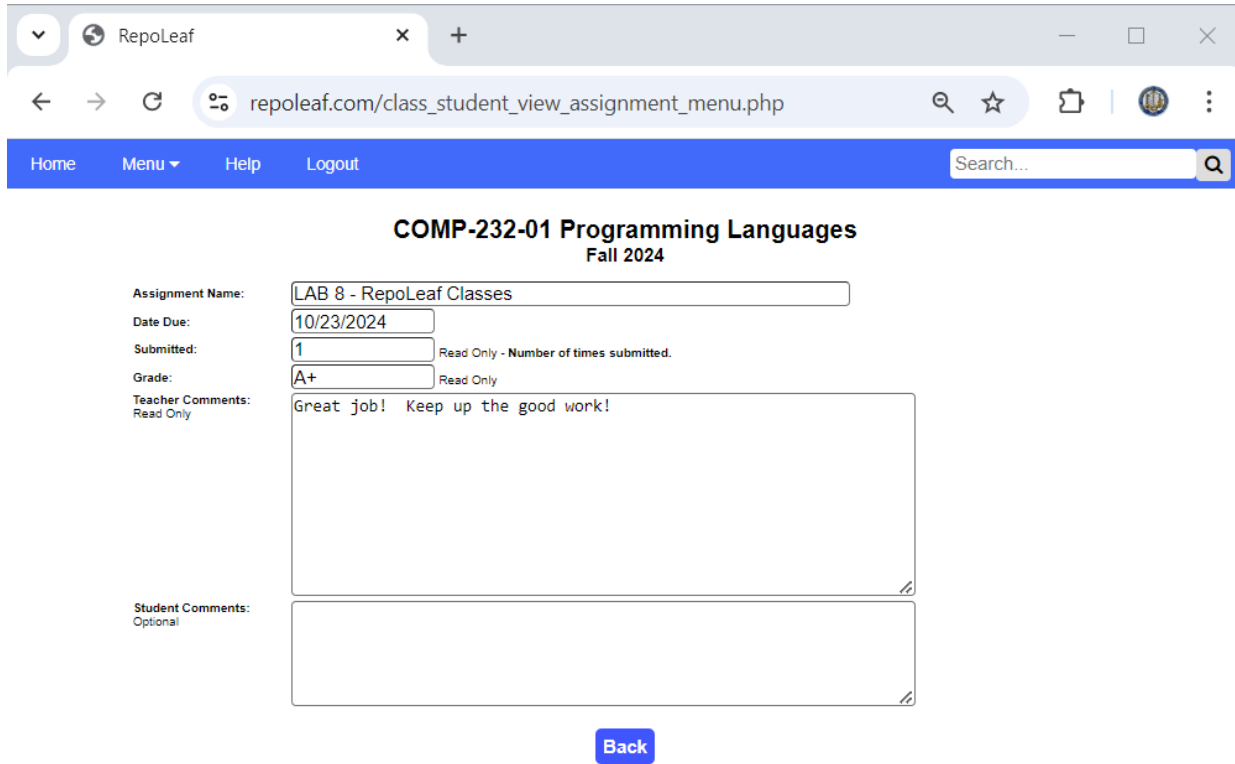
Grade:

Teacher Comments:

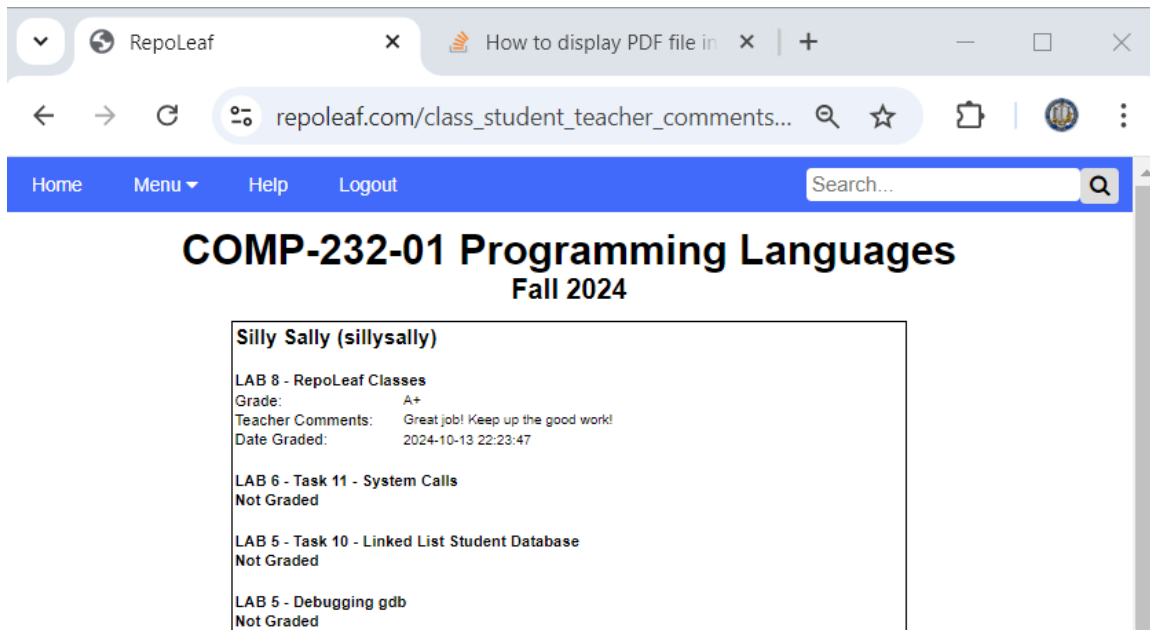
Great job! Keep up the good work!

Update Assignment **Back**

After your professor assigns you your grade, you will receive an email. When viewing your class assignments, you can click on the **View Assignment** button to view your grade and any teacher comments for an individual assignment or click on the **View Comments** button to view your grades and teacher comments for all assignments.



By clicking on the **View Comments** button, you can view your grade and teacher comments for all assignments.



If your professor allows you to do so, you can also resubmit your updated program by clicking on the **Resubmit Assignment** button.