FIRE: THE FIRST-YEAR INNOVATION & RESEARCH EXPERIENCE

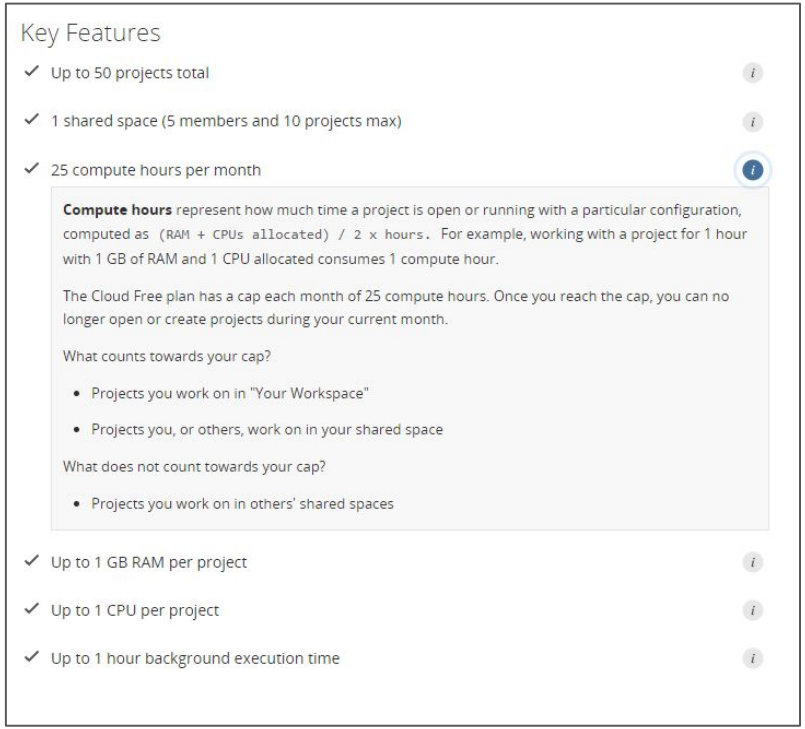
SUSTAINABILITY ANALYTICS

Introduction to Posit Cloud and R Packages

In-class Activity 1:
Create a Posit Cloud account

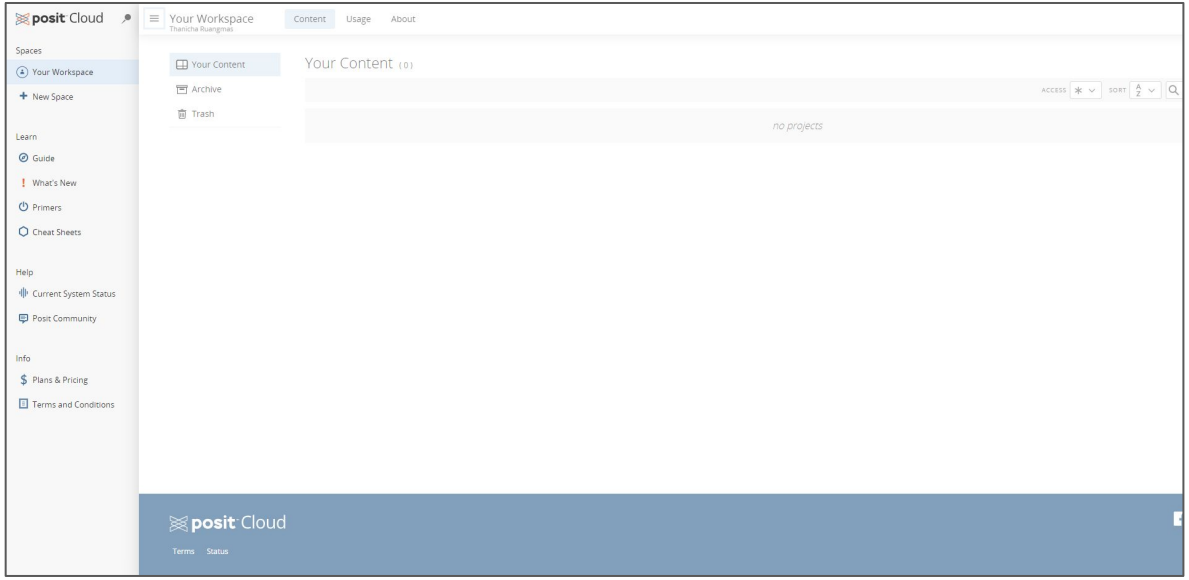
Supporting Programs

1. **R** is programming language designed for data analysis.
2. **RStudio** is a platform interface used for running R.
3. **Posit Cloud** is the website that allows you to run RStudio without installing any programs.
    a. The free account allocate 25 hours of compute hours per month
    b. Make sure to close the project when you don't need it!



In-class Activity 1: Create a Posit Cloud Account

1. Go to posit.cloud
2. Click “Get Started”
3. Click “Sign up” with the free version
4. Follow the verification process to get started



In-class Activity 2:

Create a Workspace, a Project, and a New Script

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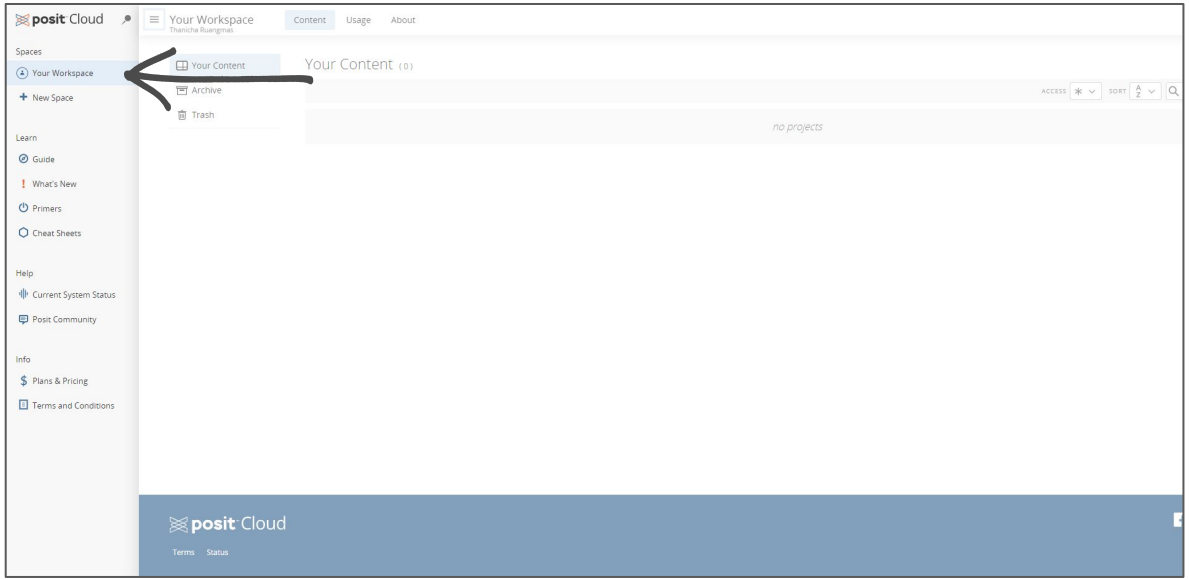
A Workspace is equivalent to a folder.

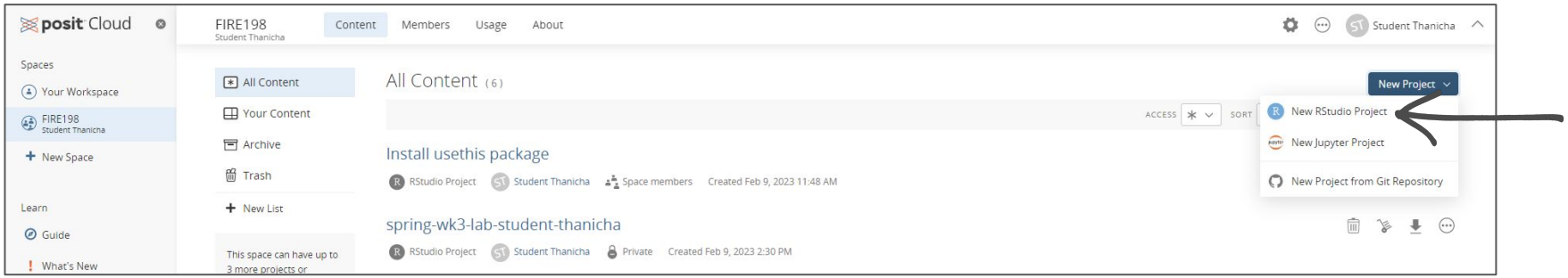
1. Create a new space and name it **FIRE198**



In-class Activity 2: Create a Workspace, a Project, and a New Script

A Project is a set of scripts and files in one analysis. In this class, each assignment is its own Project.

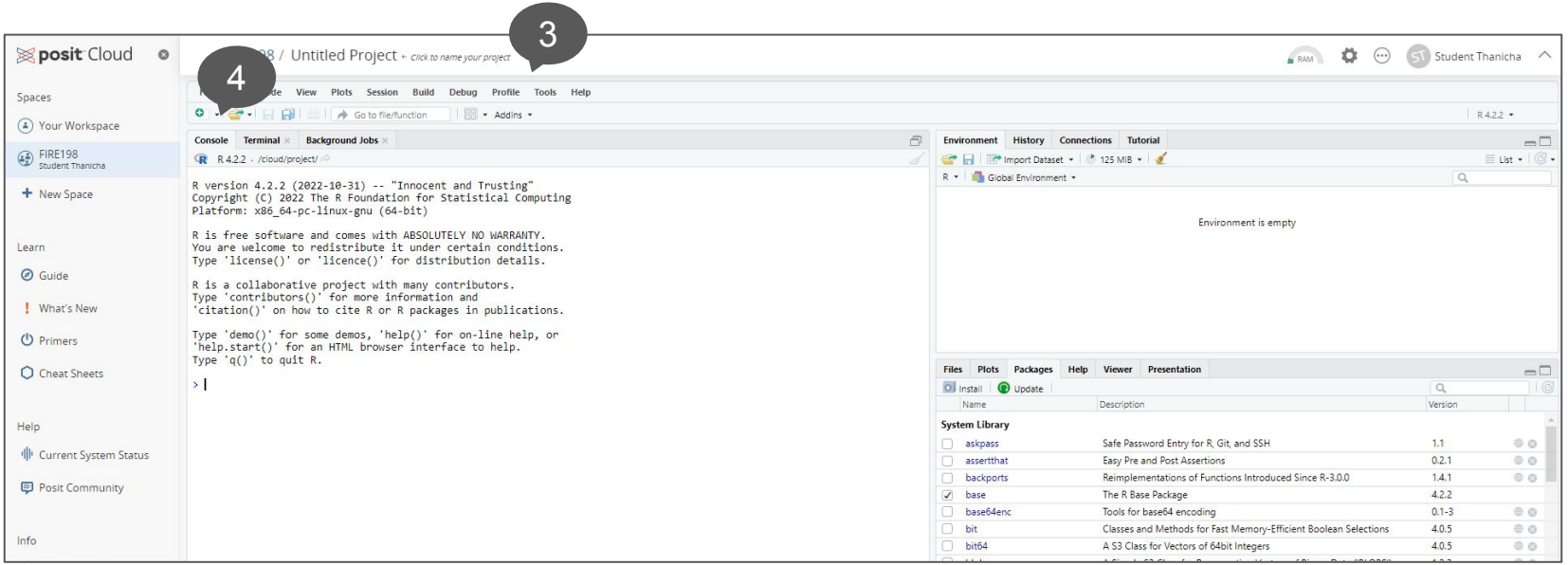
2. Create a **New RStudio Project.**



In-class Activity 2: Create a Workspace, a Project, and a New Script

3. Rename the Project to **My First Project**

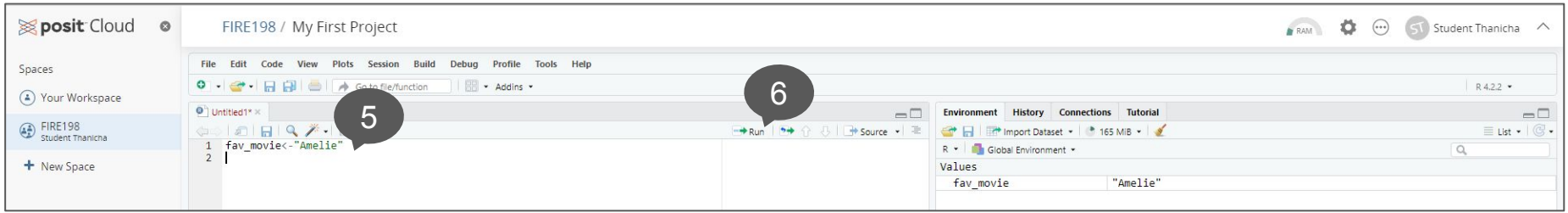
4. Click on the icon to create a new script.



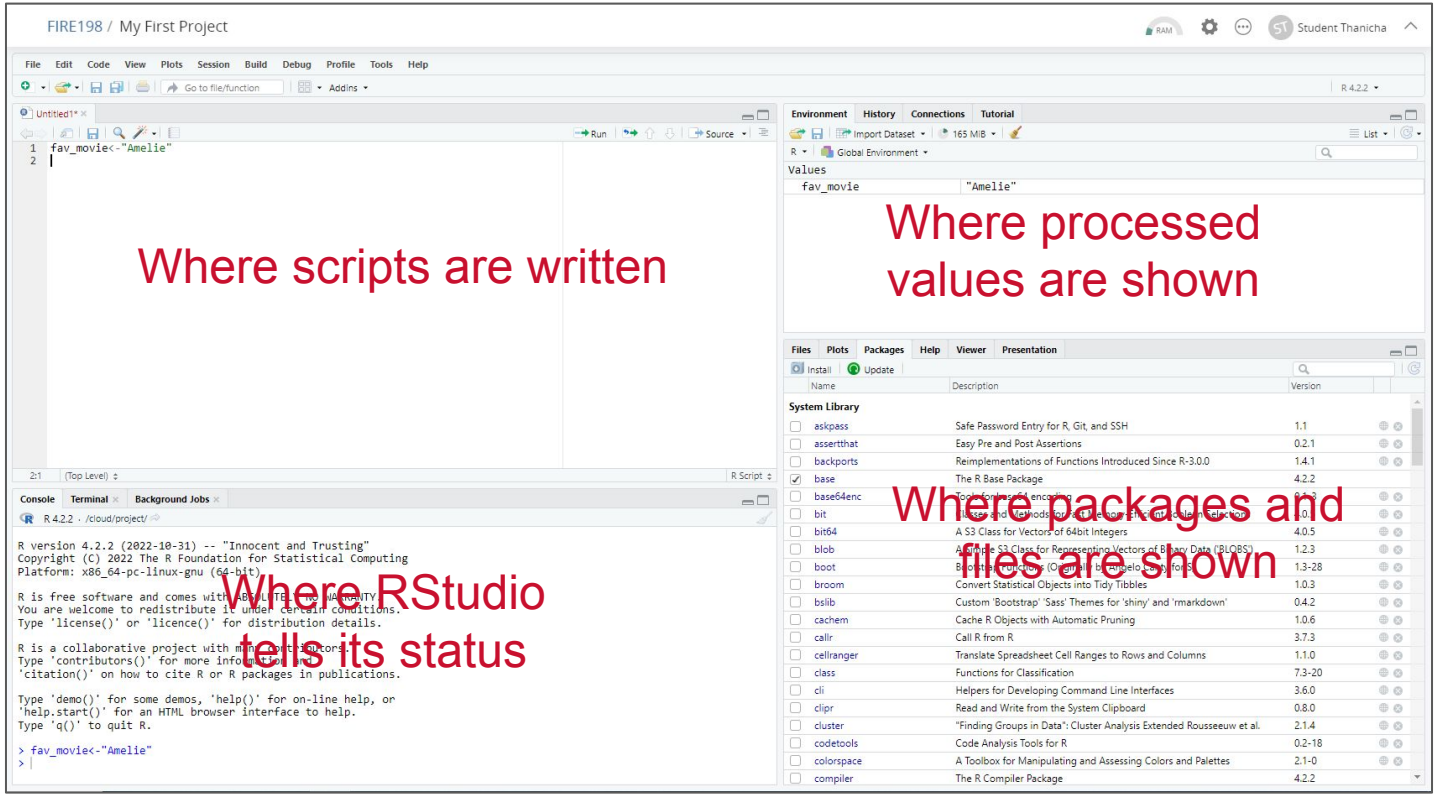
In-class Activity 2: Create a Workspace, a Project, and a New Script

5. In the console, assign the title of your favorite move to the value **fav_movie**

6. Click Run or Ctrl+Enter to process the script



RStudio's Interface

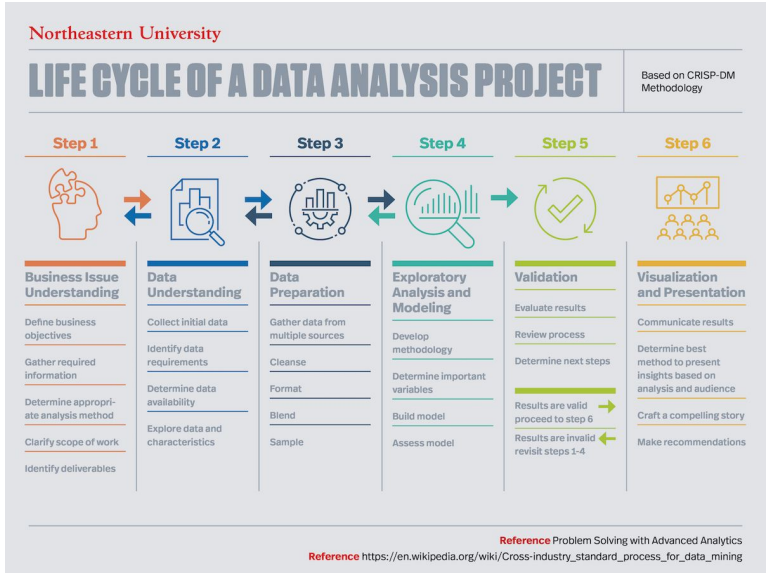


In-class Activity 3:
Install a package and set a base project

What is a package?

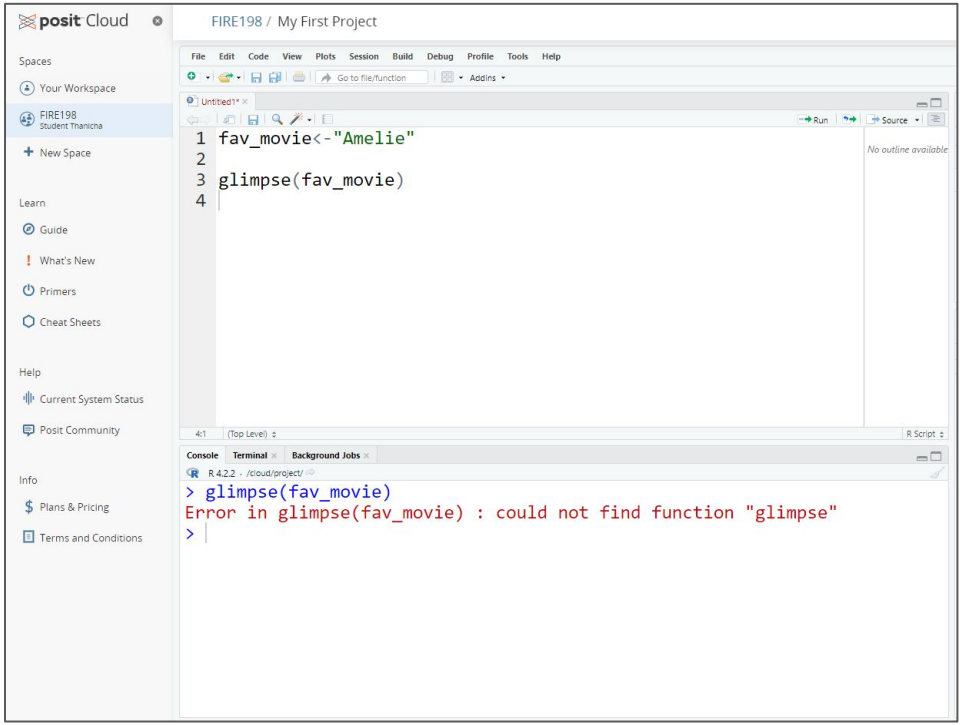
What is a package?

- A package is a bundle of code that allows users to use additional functionalities in R.
- The **tidyverse** package allows you to use the functions that you will learn in the next couple of weeks. It is a powerful tool for Data Understanding and Data Preparation.
- In order to use a package, you need to install and declare it.



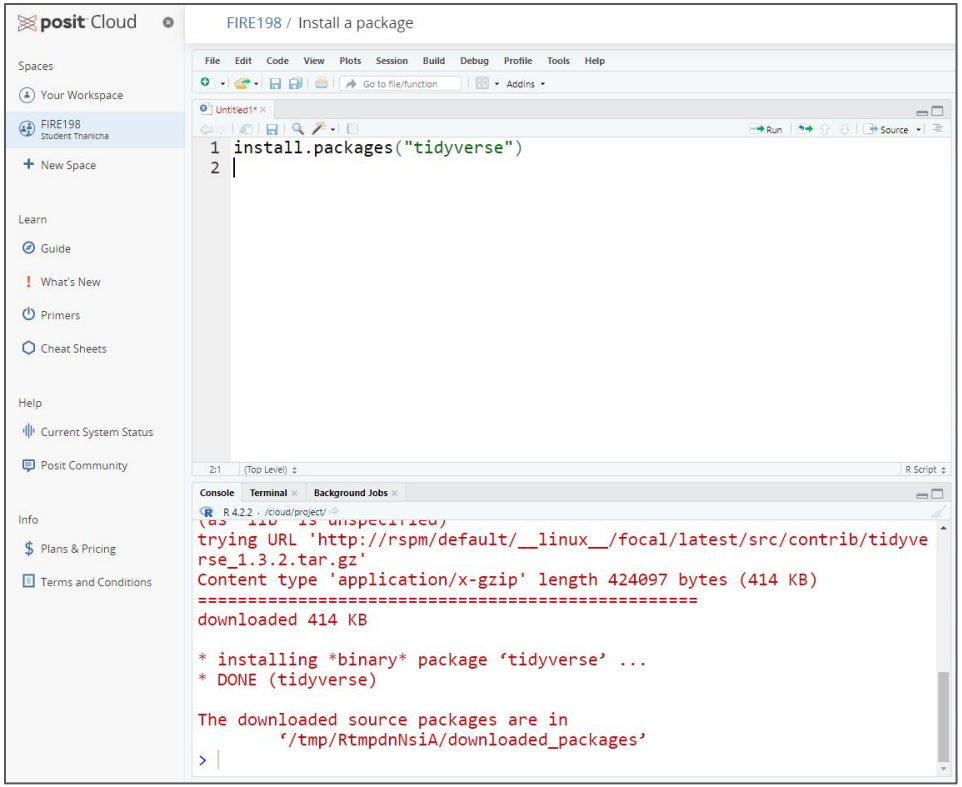
Error: Could not find function

- The function glimpse() did not work because we haven't install the **tidyverse** package yet.
- Good news: Within a Workspace, you need to install a package and set it as a base project only once.



In-class Activity 3: Install a package and set a base project

1. Go to the **FIRE198** Workspace, choose **New Project** and **New RStudio Project**
2. Rename the Workspace **Install a package**
3. In the console, type **install.packages("tidyverse")** and run it



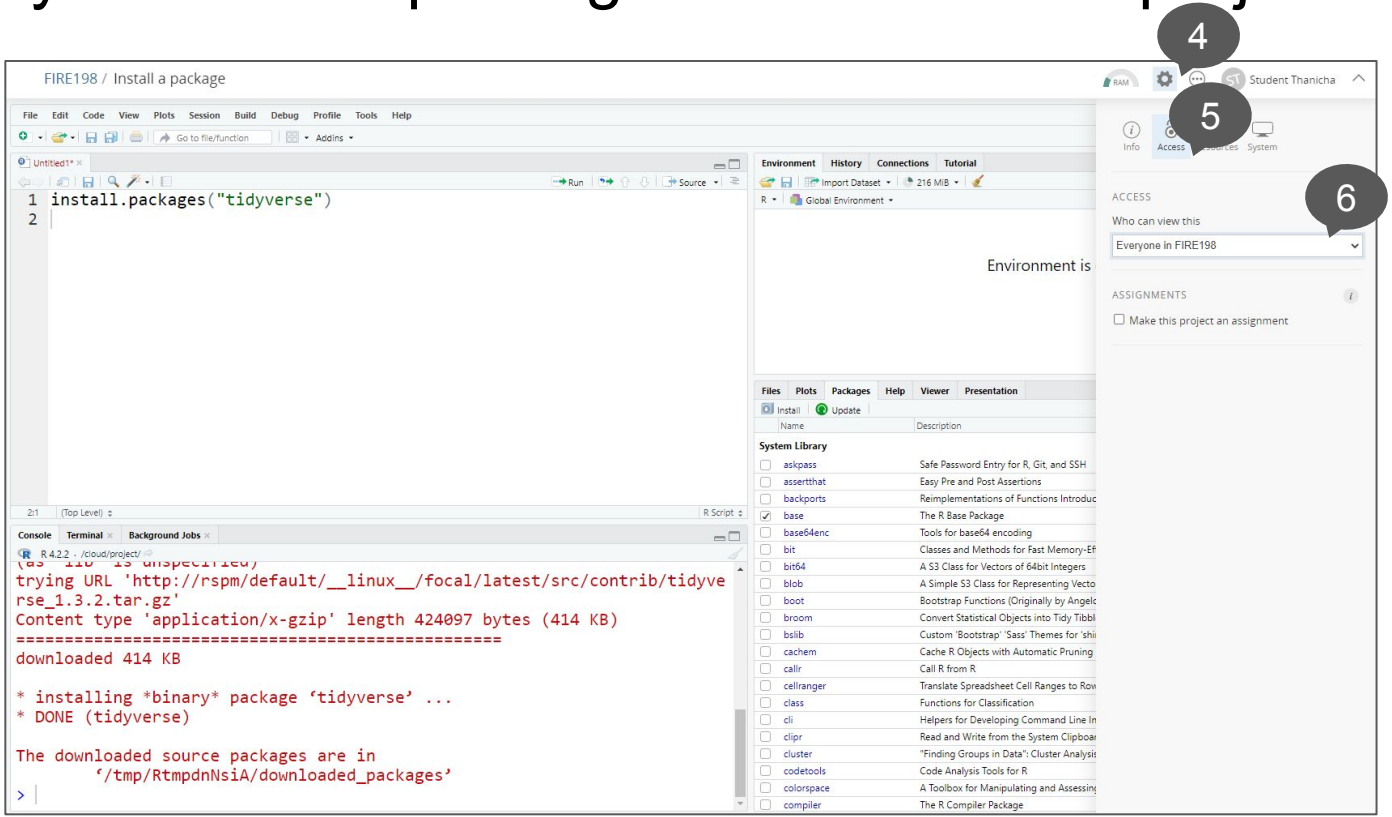
In-class Activity 3: Install a package and set a base project

Set a base project

4. Go to Settings

5. Go to Access

6. Change Who can view this to **Everyone in FIRE198**

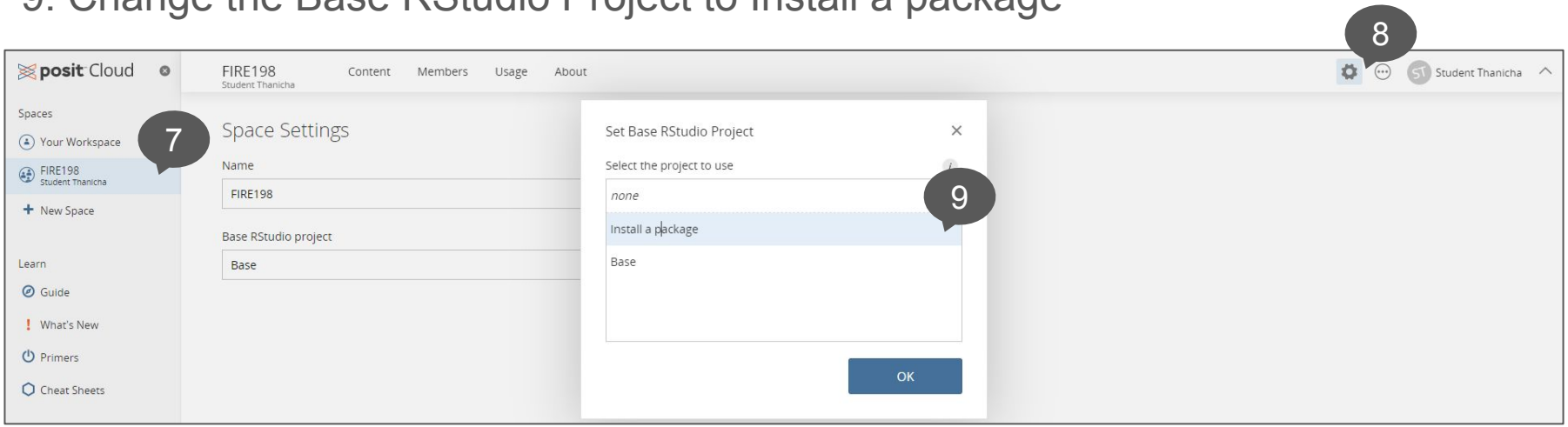


In-class Activity 3: Install a package and set a base project

7. Go back to the FIRE198 Workspace

8. Click Settings

9. Change the Base RStudio Project to Install a package



In-class Activity 3: Install a package and set a base project

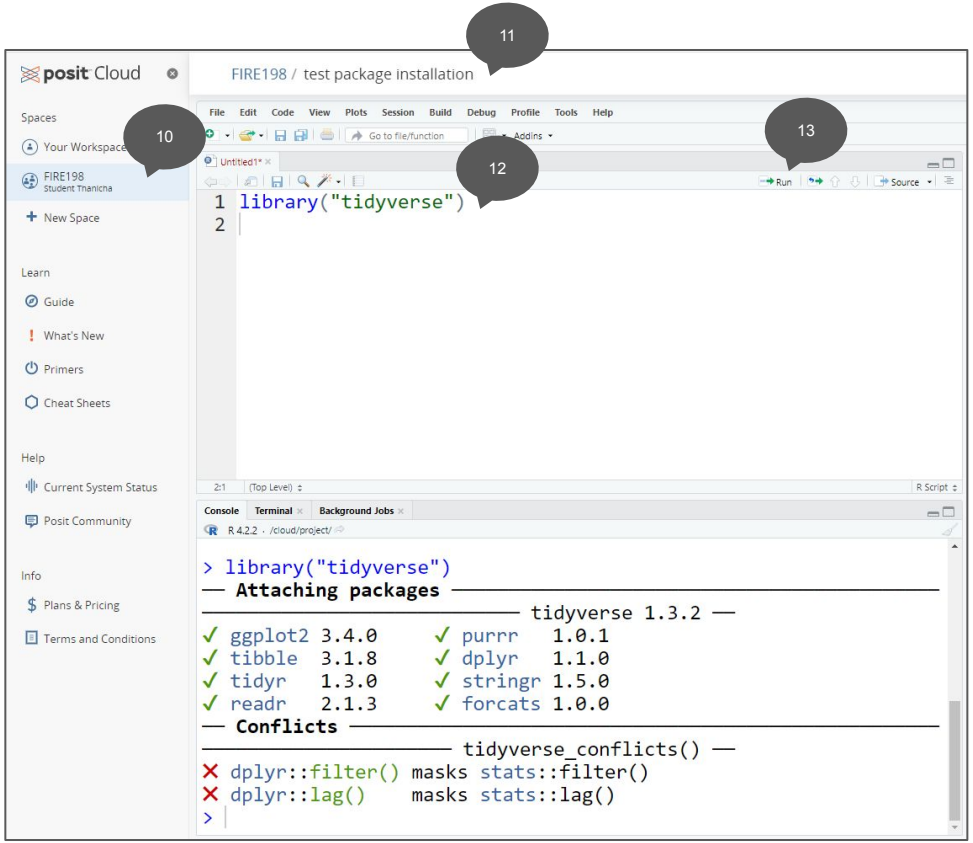
Test if it works

10. Go back to the FIRE198 Workspace

11. Create a new project and name it **test package installation**

12. Type **library(“tidyverse”)** in the console

13. Run it



In-class Activity 3: Install a package and set a base project

Test if it works

Type in the console and run

fav_movie<-”Amelie”

glimpse(fav_movie)

You will see that it summarizes the value as a character.