# Independent Study Project – Checkpoint 1

## Purpose

To create a product that engages you and that you would be proud to share to a public audience.

Along the way, you will develop your ability to problem-solve using a variety of strategies, to implement a solution in code, to manage source code using accepted industry practices, and to plan and meet commitments for project milestones.

## Evaluation

As described in January, I am now taking a standards-based approach to evaluating your progress in the course.

What does that mean?

It means that I value the *process* of your work on this ISP as much as your *product.*

It means that I am looking, quite simply, for you to provide evidence of having met the expectations listed.

To that end: using your commits on GitHub, and your posts on Sesame, how would *you* evaluate your progress so far?

You probably will not have yet demonstrated *all* of the expectations, but have you hit some? How often?

For each expectation shown on the following pages:

1. Provide links(s), optionally with brief explanatory text to specific parts of a commit in your source control history
2. Give yourself a 1 to 5 star rating

## Curriculum Expectations

### A1. Data Types and Expressions Demonstrate the ability to use different data types, including one-dimensional arrays, in computer programs;

**A1.1** use constants and variables, including integers, floating points, strings, and Boolean values, correctly in computer programs;

ASCII, Unicode) to internally represent data and store information;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Setting the root of my API as a static variable in the global class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/Global.swift#L33) * [Declaring an integer holding how many times a certain button is pressed](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L17) * [Declaring properties of the user class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/User.swift#L12-L16) * [Declaration of string constants holding username and password](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L45-L46) * [Declaration of constant holding student id](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L71) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A1.3** use assignment statements correctly with both arithmetic and string expressions in computer programs;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [assigning values to various properties in the schedule class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/Schedule.swift#L23-L70) * [assigning values to various properties in the user class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/User.swift#L21-L46) * [changed button shape by changing their corner radius property using an assignment statement](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L35-L36) * [used division operator while assigning color to navigation bar](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L29) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A1.4** demonstrate the ability to use Boolean operators (e.g., AND, OR, NOT), comparison operators (i.e., equal to, not equal to, greater than, less than, greater than or equal to, less than or equal to), arithmetic operators (e.g., addition, subtraction, multiplication, division, exponentiation, parentheses), and order of operations correctly in computer programs;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Use of logical AND, NOT and equal to comparison operators.](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC Organizer/RSGC Organizer/RegisterViewController.swift" \l "L38-L39) * [Filtering through different HTTP status codes and handling them using if statements](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/RegisterViewController.swift#L48-L84) * [If-else ladders in schedule class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/Schedule.swift#L55-L91) * [Use of logical AND in schedule entry view controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L56) * [If-else ladder in schedule entry view controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L57-L87) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A1.5** describe the structure of one-dimensional arrays and related concepts, including elements, indexes, and bounds;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Using dictionary data as input to user class.](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/User.swift#L29-L36) * [Authenticating user and collecting response as dictionary](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L51-L60) * [Using dictionary data as input to student class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/Student.swift#L19-L24) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A1.6** write programs that declare, initialize, modify, and access one-dimensional arrays.

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Accessing one-dimensional array returned by JSON](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/62ff85a4f881d6f363c3858388a263ee0c2e428b/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L57-L59) * [Using a dictionary as parameters for a PUT request to change the user’s schedule](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/b678a79e7c51c8777e93e6faf4326203ec6fbdee/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L62-L87) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

### A2. Control Structures and Simple Algorithms Demonstrate the ability to use control structures and simple algorithms in computer programs;

**A2.1** write programs that incorporate user input, processing, and screen output;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Login View Controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/ViewController.swift) * [Schedule View Controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/ScheduleViewController.swift) * [Registration View Controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/RegisterViewController.swift) * [Enter Schedule View Controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/8e37357b9f5fcdac47c0fcb776d4051b0514b7df/RSGC Organizer/RSGC Organizer/EnterScheduleViewController.swift) * [Settings View Controller](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/b678a79e7c51c8777e93e6faf4326203ec6fbdee/RSGC Organizer/RSGC Organizer/SettingsViewController.swift) * All three of these view controllers incorporate user input process it and update the screen output |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A2.2** use sequence, selection, and repetition control structures to create programming solutions;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Used nested for loops to create dictionary that holds parameters for a JSON post request.](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/8e37357b9f5fcdac47c0fcb776d4051b0514b7df/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L42-L47) * [Used sequence and selection to collect data from the backend in correct order when logging in the user.](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC Organizer/RSGC Organizer/ViewController.swift" \l "L44-L112) * [Used sequence and selection when registering user](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC Organizer/RSGC Organizer/RegisterViewController.swift" \l "L38-L103) * [Used sequence and selection when adding the users schedule](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L90-L132) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A2.3** write algorithms with nested structures (e.g., to count elements in an array, calculate a total, find highest or lowest value, or perform a linear search).

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Used nested for loops to create dictionary that holds parameters for a JSON post request.](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/8e37357b9f5fcdac47c0fcb776d4051b0514b7df/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L42-L47) * [Nested Alamofire calls and if statements to correctly login user and show errors to the user](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/ViewController.swift#L55-L111) * [Nested Alamofire calls to register the user](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/576b76f3d4cdf4211d98ee04e8e75fb042e58eec/RSGC%20Organizer/RSGC%20Organizer/RegisterViewController.swift#L38-L103) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

### A3. Subprograms Demonstrate the ability to use subprograms within computer programs;

**A3.1** demonstrate the ability to use existing sub-programs (e.g., random number generator, substring, absolute value) within computer programs;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Using existing swift function to trim strings](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/RegisterViewController.swift" \l "L41-L43) * [Using Alamofire library to register users to my backend](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/RegisterViewController.swift" \l "L37-L84) * [Using Alamofire library to login users](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/ViewController.swift" \l "L51-L108) * [Using UIAlerts for error messages](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/RegisterViewController.swift#L63-L84) * [Hid the back button on a view controller using an existing function](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/ScheduleViewController.swift#L73) * [Using existing functionality save data to the iPhone’s local memory](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/b678a79e7c51c8777e93e6faf4326203ec6fbdee/RSGC%20Organizer/RSGC%20Organizer/Global.swift#L84-L86) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A3.2** write subprograms (e.g., functions, procedures) that use parameter passing and appropriate variable scope (e.g., local, global), to perform tasks within programs.

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [Functions / closures for accessing time and other key values in the global class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC Organizer/RSGC Organizer/Global.swift" \l "L39-L76) * [Function that updates the schedule view controller with the correct data](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/ScheduleViewController.swift#L45-L69) * [Function that updates schedule data within the schedule class](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/Schedule.swift#L73-L90) * [Function to close software keyboard](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/5116e499ad90abff6cb6759552a51294511b9ecf/RSGC%20Organizer/RSGC%20Organizer/ScheduleViewController.swift#L82-L84) * [Function to Complete User Registration](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/8e37357b9f5fcdac47c0fcb776d4051b0514b7df/RSGC%20Organizer/RSGC%20Organizer/EnterScheduleViewController.swift#L90-L132) * [Closures for saving and retrieving data from the iPhone’s internal memory](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/blob/b678a79e7c51c8777e93e6faf4326203ec6fbdee/RSGC%20Organizer/RSGC%20Organizer/Global.swift#L83-L104) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

### A4. Code Maintenance Use proper code maintenance techniques and conventions when creating computer programs.

**A4.1** demonstrate the ability to identify and correct syntax, logic, and run-time errors in computer programs;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * See my Sesame page for posts regarding errors * [GitHub commit where I find an error](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/commit/739ec5589bbe478603aaba02953a622ad543c93c) * [GitHub commit where I fix the error](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/commit/8627544f88ceb6f337d0d0228daaa02290fdd7c0) |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A4.2** use workplace and professional conventions (e.g., naming, indenting, commenting) correctly to write programs and internal documentation;   
 (also includes use of source control)

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * [See my GitHub repository for frequent and descriptive commits](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/commits/b6c70754fa4e64c1915f53a6c87c7060632a2557) * [See my swift code files for proper naming, indentation and commenting](https://github.com/rsgc-peterson-e/enhanced-organizer-app-isp/tree/b6c70754fa4e64c1915f53a6c87c7060632a2557/RSGC%20Organizer/RSGC%20Organizer) * See my Sesame page as well for documentation on my goals and progress |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A4.3** demonstrate the ability to interpret error messages displayed by programming tools (e.g., compiler, debugging tool), at different times during the software development process (e.g., writing, compilation, testing);

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * See my Sesame page for posts regarding errors |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A4.4** use a tracing technique to understand program flow and to identify and correct logic and run-time errors in computer programs;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * See my Sesame page for posts regarding errors |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**A4.5** demonstrate the ability to validate a program using a full range of test cases.

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * See my test plan word document inside of my GitHub repository |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

### B1. Problem-solving Strategies Use a variety of problem-solving strategies to solve different types of problems independently and as part of a team;

**B1.1** use various problem-solving strategies (e.g., stepwise refinement, divide and conquer, working backwards, examples, extreme cases, tables and charts, trial and error) when solving different types of problems;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
| * Refer to my Sesame posts |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

**B1.2** demonstrate the ability to solve problems independently and as part of a team;

| Evidence: provide link(s) where possible, optionally provide brief explanatory text, add rows as needed |
| --- |
|  |
|  |

**Overall rating on this standard**: ✩ ✩ ✩ ✩ ✩

## Comments and Proposal for Level of Achievement

Understanding that this is a checkpoint 1/3 of the way into the ISP, and that mastery of all standards is not expected at this point in time, what do you suggest as your current level of achievement? Why?