**Use Case Name #1**: Inputting Source Code

**Summary**: The user selects their source code file as input to the PPALMS application.

**Basic Course of Events**:

1. The user selects the upload file option from the user interface.
2. The user selects their source code file.
3. The user interface will update displaying the uploaded source code and question information form.

**Exception Path**: There may be an instance where the file provided is not a valid programming file. In this case, the user will follow steps 1-2 in the basic course of events, but step 3 will be replaced with the user interface indicating that the user has selected an invalid file. The user will then have to re-upload a new source code file to proceed.

**Trigger**: The user has started the application

**Assumptions**: The user has an intended source code file in their file system.

**Precondition**: The user has a file with which they would like to make a Parson’s problem.

**Postcondition**: The source code provided will display on the user interface and be used throughout the question form.

**Author**: Anthony Narlock, Stephanie Ye, Shen Lua, Jaden Rodriguez

**Date**: 09/30/2022

**Use Case Name #2**: Selecting a Parson’s problem type

**Summary**: The user specifies the type of Parson’s problem for their given source code.

**Basic Course of Events**:

1. The user selects a type from a set of Parson’s problem types compatible with their chosen LMS.
2. The user interface will display a problem annotation interface corresponding to the chosen problem type. Under all type selections, the user interface will have the option to input problem title or description.

**Exception Path**: None

**Trigger**: The system has validated the user’s LMS selection

**Assumptions**: A valid source code file has been inputted to the application. (That is, the use case “Input Source Code” has been successfully completed).

**Precondition**: The source code has been successfully inputted and the target LMS has been chosen.

**Postcondition**: The user interface will update based on the problem type.

**Author**: Anthony Narlock, Stephanie Ye, Shen Lua, Jaden Rodriguez

**Date**: 09/30/2022

**Use Case Name #3**: Selecting the target LMS

**Summary**: The user selects which LMS the Parson’s Problem will be exported to.

**Basic Course of Events**:

1. The user has entered a source code file into the user interface
2. The available LMS options are displayed to the user for input
3. The user selects a given LMS

**Exception Path**: None

**Trigger**: The system has verified the user’s source file input

**Assumptions**: The user has an intended LMS target

**Precondition**: The user has provided a valid source code file.

**Postcondition**: The user may proceed with Parson’s Problem annotation.

**Author**: Stephanie Ye, Anthony Narlock, Shen Lua, Jaden Rodriguez

**Date**: 09/30/2022

**Use Case Name #4**: Indicating which sections to annotate

**Summary**: To create the Parson’s Problem, the user annotates sections of the code for inclusion/exclusion.

**Basic Course of Events**:

1. User annotates their problem with the problem annotation interface

**Exception Path**: None

**Trigger**: The user interacts with the problem annotation interface

**Assumptions**: The user has annotations in mind for their Parson’s problem

**Precondition**: The user has selected a problem type

**Postcondition**: The user has the option to indicate problem completion

**Author**: Shen Lua, Anthony Narlock, Stephanie Ye, Jaden Rodriguez

**Date**: 09/30/2022

**Use Case Name #5**: User provides a title and description to their chosen problem

**Summary**: The user wants to provide a title and description for their Parson’s Problem

**Basic Course of Events**:

1. The user has selected a problem type
2. The user enters a title, description, or both

**Exception Path**: The user does not provide a title, description, nor both

**Trigger**: The user interacts with the interface to enter a title and description

**Assumptions**: The system has acknowledged the user’s problem type selection

**Precondition**: The user has selected their Parsons’s problem type

**Postcondition**: User may proceed to annotate their Parson’s Problem

**Author**: Shen Lua, Anthony Narlock, Stephanie Ye, Jaden Rodriguez

**Date**: 09/30/2022

**Use Case Name #6**: Exporting problem to LMS target

**Summary**: The user wants to export their problem to their selected LMS target.

**Basic Course of Events**:

1. The user has completed selections and annotations
2. The user initiates problem export to target LMS
3. The user is given indication of success by system

**Exception Path**: User has not completed annotation, export is aborted and an error message will display saying which fields have not been filled out

**Trigger**: The user indicates their problem should be exported to a selected LMS.

**Assumptions**: The user has completed annotation

**Precondition**: The user has been allowed to interact with the problem annotation interface.

**Postcondition**: Problem is successfully exported and the system indicates success, or indication of failure if requirements have not been satisfied.

**Author**: Anthony Narlock, Stephanie Ye, Shen Lua, Jaden Rodriguez

**Date**: 09/30/2022