

System Design Document

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December 1st
2025

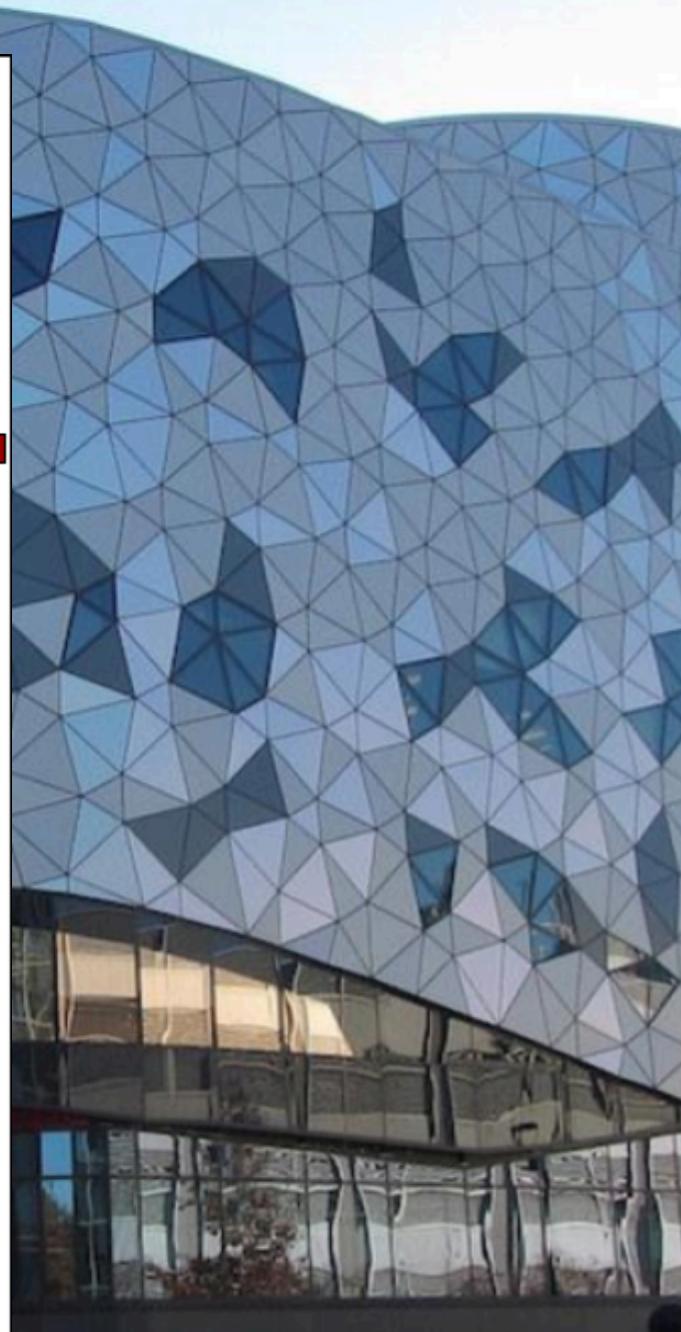


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CRC High Level Class Description

DBConnector	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Connects to the database on the local server	<ul style="list-style-type: none">• RegisterController• LoginController• HomeController• HabitController• Optimizer
DBInput	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Passes input parameters to the local database server	<ul style="list-style-type: none">• RegisterController• LoginController• HabitController
DBOutput	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Fetches the required data from the local database	<ul style="list-style-type: none">• LoginController• HabitController• Optimizer

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CreateUserPage	
Responsibilities	Collaborators
<ul style="list-style-type: none">• UI to handle entering of new user information• Passes information to RegisterController	<ul style="list-style-type: none">• RegisterController
LoginPage	
Responsibilities	Collaborators
<ul style="list-style-type: none">• UI to handle the login information from input• Passes information to LoginController	<ul style="list-style-type: none">• LoginController
HomePage	
Responsibilities	Collaborators
<ul style="list-style-type: none">• UI to handle to home page navigation• Passes information to HomeController	<ul style="list-style-type: none">• HomeController• LoginController

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HabitPage		
Responsibilities		Collaborators
<ul style="list-style-type: none">• UI to handle the habit inputs from input• Passes information to HabitController		<ul style="list-style-type: none">• HabitController• HomeController• Optimizer
HabitCard		
Responsibilities		Collaborators
<ul style="list-style-type: none">• UI to handle the habit cards of the habits• Passes information to HabitController		<ul style="list-style-type: none">• HabitController• Optimizer
WeeklyPlanner		
Responsibilities		Collaborators
<ul style="list-style-type: none">• UI to handle showing the created weekly schedule		<ul style="list-style-type: none">• Optimizer

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RegisterController	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Controller to handle entering the new registered account information• Passes information to the database and the HomeController	<ul style="list-style-type: none">• CreateUserPage• HomeController• DBConnector• DBInput
LoginController	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Controller to handle entering a user's account information• Passes information to the database and the HomeController	<ul style="list-style-type: none">• LoginPage• HomeController• DBConnector• DBInput• DBOutput
HabitController	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Controller to handle entering habits information• Passes information to the database and the HabitPage	<ul style="list-style-type: none">• HabitPage• HabitCard• Optimizer• DBConnector• DBInput• DBOutput

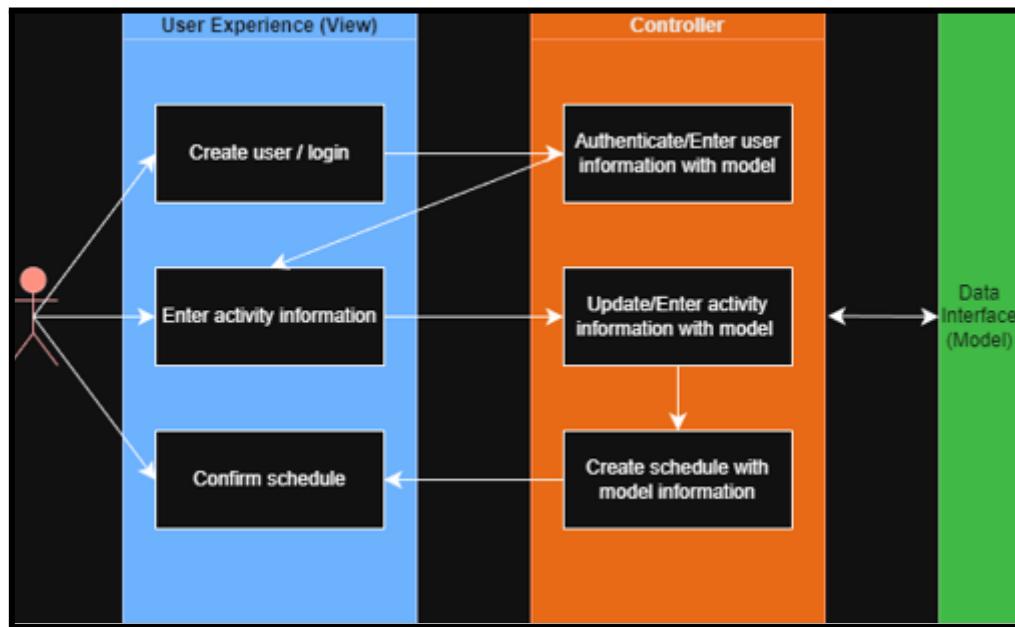
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HomeController	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Controller to handle the buttons on the HomePage• Passes information to either the HabitPage if that button is pressed	<ul style="list-style-type: none">• HomePage• HabitPage• RegisterController• LoginController• DBConnector
Optimizer	
Responsibilities	Collaborators
<ul style="list-style-type: none">• Controller to handle optimizing all of the user's habits• Passes information to the WeeklyPlanner	<ul style="list-style-type: none">• HabitPage• HabitCard• WeeklyPlanner• HabitController• DBConnector• DBOutput

System Interaction With Environment

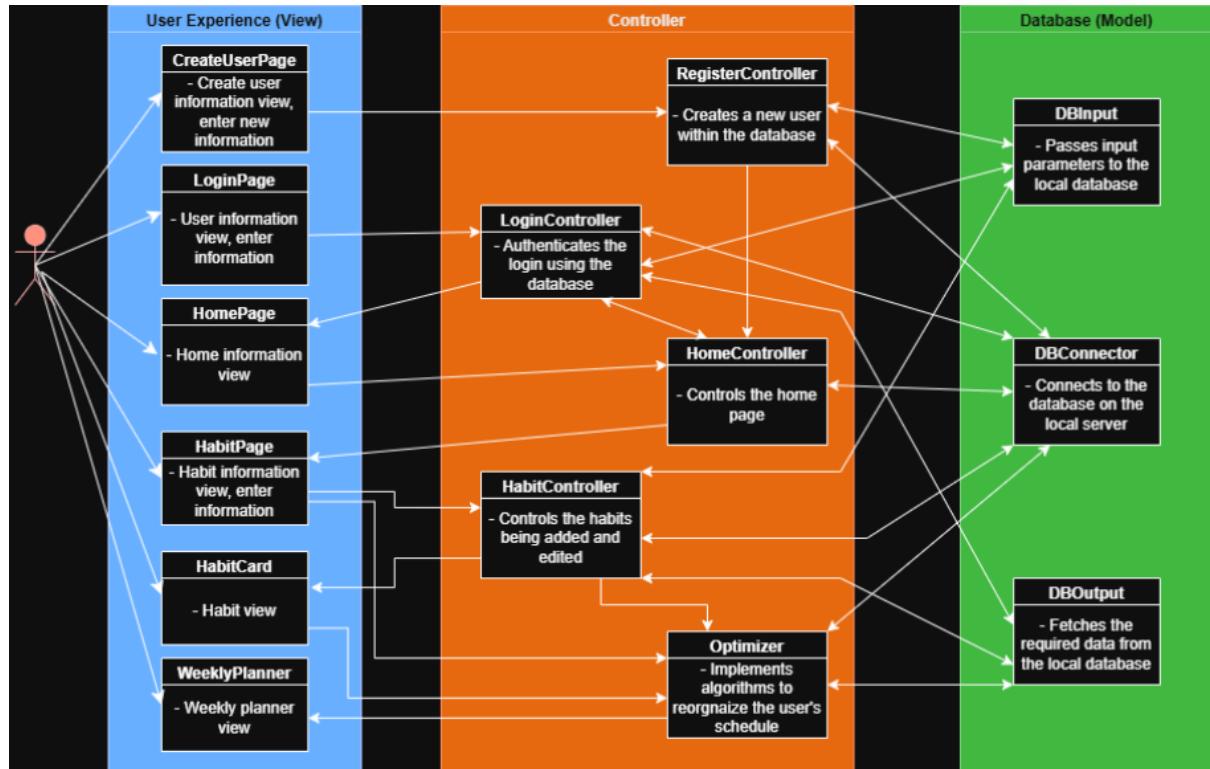
The system requires the Java 21 JDK, Java Swing (& SQL I guess? Edit Later) in order to run on all platforms (Windows, Mac, Linux). There is no internet connection required, and there is no credential/account creation required (currently) in order to use the app to its full potential.

Architecture Of System



On a high level, each page will transmit data entered through controllers to the database and back to the page when necessary. The database will be receiving and giving information at each stage to allow flow to the next through the controllers.

System Decomposition



Each of the important tasks that the application can perform (such as creating a user, logging in and creating a habit) has their own Page. That page is then

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controlled by its own specific Controller that is specific for that page. Those Controllers use the local database through the Models: DBConnector, DBInput and DBOutput to get that specific task done for the specific user that is currently logged in or assist in them logging in or creating an account. This format allows all the tasks to be handled properly with MVC.