

# Detailed Schedule

	Due Date	Development Plan	Test and Demonstration Plan
Jan	30	<ul style="list-style-type: none"> <li>Draft Webpages               <ul style="list-style-type: none"> <li>Navbar, Home Page</li> <li>Lesson Page</li> <li>Manipulator Page</li> <li>Creator Page</li> <li>Explore Page</li> <li>About/Contact us Page</li> <li>User Profile Page</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The user will be able to navigate through prototypes of the major pages of the website</li> </ul>
Feb	6	<ul style="list-style-type: none"> <li>Continue making draft webpages               <ul style="list-style-type: none"> <li>Account Creation Page</li> <li>Login Page (Modal?)</li> <li>Expression Tree Data Representation</li> </ul> </li> <li>Define data layout/class hierarchy</li> <li>Expression Tree Rendering</li> <li>Server               <ul style="list-style-type: none"> <li>Rules for setting up/running</li> <li>Working server that serves website files on localhost</li> </ul> </li> <li>Algebraic Action handling               <ul style="list-style-type: none"> <li>Specify all the kinds of algebraic actions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The user will be able to view a prototyped rendered expression tree in the manipulation window</li> <li>Documentation will be written which defines the algebraic actions and their meanings. Initial implementations of these objects will be created.</li> <li>User will be able to navigate the created pages of the website sent by a server on localhost</li> </ul>
	13	<ul style="list-style-type: none"> <li>Expression Tree Rendering</li> <li>Define data layout/class hierarchy</li> <li>Algebraic Action handling</li> <li>Expression Tree User Interaction</li> <li>Expression Manipulator Page/UI</li> <li>Server               <ul style="list-style-type: none"> <li>Error Handling</li> <li>Research and handling of security issues</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Basic algebraic actions will be implemented, and unit tests will be written which test applying the actions to expression trees.</li> <li>JSON serialization/deserialization will be implemented on expression trees.</li> <li>Some user interaction will be supported for manipulating expression trees.</li> </ul>

	20	<ul style="list-style-type: none"> <li>• Server <ul style="list-style-type: none"> <li>◦ Set-up series of dummy files for website to use</li> </ul> </li> <li>• Algebraic Action handling</li> <li>• Expression Tree User Interaction</li> <li>• Expression Manipulator Page/UI</li> </ul>	<ul style="list-style-type: none"> <li>• Expression trees will be more manipulatable</li> <li>• More algebraic actions will be implemented</li> <li>• Users can manipulate pre-made Expression Trees</li> <li>•</li> </ul>
	27	<ul style="list-style-type: none"> <li>• Algebraic Action handling</li> <li>• Expression Tree User Interaction</li> <li>• Expression Manipulator Page/UI</li> <li>• Database <ul style="list-style-type: none"> <li>◦ Define Schema</li> <li>◦ Rules for setting up</li> </ul> </li> <li>• Set up AI <ul style="list-style-type: none"> <li>◦ Determining Heuristic</li> <li>◦ Skeleton search function</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Expression trees will have all the basic algebraic actions implemented via the UI.</li> <li>• All algebraic actions will be implemented and integrated into the manipulation page. Finished unit tests written.</li> <li>• Unit tests for AI Solver will be implemented</li> </ul>
Mar	Break		
	13	<ul style="list-style-type: none"> <li>• Set up AI <ul style="list-style-type: none"> <li>◦ Work on Search function</li> </ul> </li> <li>• Problem Generator</li> <li>• Log-in System</li> <li>• User Accounts</li> <li>• History Implementation</li> <li>• Use JS to put DB data on web pages</li> <li>• Database <ul style="list-style-type: none"> <li>◦ Database wrapper class</li> <li>◦ Storage Handling</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Initial implementation of History bar will be done.</li> <li>• Some user-created problems/lessons can be sent from the server/database to the website.</li> <li>• Initial User Account system will be done</li> <li>• Unit tests for Problem Generator implemented</li> <li>• Unit tests for Database adding and reading files will be implemented</li> </ul>

	20	<ul style="list-style-type: none"> <li>• Database <ul style="list-style-type: none"> <li>◦ Delete Handling</li> </ul> </li> <li>• Set up AI <ul style="list-style-type: none"> <li>◦ Work on search function</li> </ul> </li> <li>• Problem Generator</li> <li>• Log-in System <ul style="list-style-type: none"> <li>◦ Google Sign-In implementation</li> </ul> </li> <li>• User Accounts <ul style="list-style-type: none"> <li>◦ Bare bones implementation</li> </ul> </li> <li>• History Implementation</li> <li>• Use JS to put DB data on web pages</li> <li>• Expression Creator Page/UI</li> </ul>	<ul style="list-style-type: none"> <li>• History bar will be implemented and integrated into manipulator page</li> <li>• The website will display user-created problems and lessons which it gets from the server/database</li> <li>• Initial implementation of expression creation page will be done.</li> <li>• Users can login with Google</li> <li>• Users can make problems of varying difficulty.</li> <li>• Preliminary AI will be implemented</li> </ul>
	27	<ul style="list-style-type: none"> <li>• Set up AI <ul style="list-style-type: none"> <li>◦ Work on search function</li> </ul> </li> <li>• Problem Generator</li> <li>• Log-in System <ul style="list-style-type: none"> <li>◦ Connect to database</li> </ul> </li> <li>• User Accounts <ul style="list-style-type: none"> <li>◦ Implementation of website and database-facing features</li> </ul> </li> <li>• Use JS to put DB data on web pages</li> <li>• Expression Creator Page/UI</li> </ul>	<ul style="list-style-type: none"> <li>• Users can choose a difficulty when using the Problem Generator</li> <li>• Users can view stored data associated with their account</li> <li>• AI search capabilities will be improved</li> </ul>
Apr	3	<ul style="list-style-type: none"> <li>• Expression Creator Page/UI</li> <li>• Tutorials <ul style="list-style-type: none"> <li>◦ Implementation</li> </ul> </li> <li>• Spiffy up webpage design (CSS)</li> <li>• Finalize Website design</li> <li>• Set up AI <ul style="list-style-type: none"> <li>◦ Complete Search function</li> </ul> </li> <li>• Deployment <ul style="list-style-type: none"> <li>◦ Research options</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Expression creation page will be done.</li> <li>• Initial Tutorial pages will be done</li> <li>• AI search capabilities will be improved</li> <li>• Web page design will be updated</li> </ul>
	10	<ul style="list-style-type: none"> <li>• Tutorials <ul style="list-style-type: none"> <li>◦ Design of Content</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• User can ask for help on the manipulation page and receive an answer</li> <li>• AI will be finalized</li> </ul>

		<ul style="list-style-type: none"> <li>• Spiffy up webpage design (CSS)</li> <li>• Finalize Website design</li> <li>• Work on AI <ul style="list-style-type: none"> <li>◦ Testing/Training</li> </ul> </li> <li>• Deployment <ul style="list-style-type: none"> <li>◦ Set up</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Web page design will be updated</li> <li>• Preliminary tutorials will be completed</li> </ul>
	17	<ul style="list-style-type: none"> <li>• Tutorials <ul style="list-style-type: none"> <li>◦ Testing and Review</li> </ul> </li> <li>• Spiffy up webpage design (CSS)</li> <li>• Finalize Website design</li> <li>• Deployment <ul style="list-style-type: none"> <li>◦ Testing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Users can use the tutorial system</li> <li>• Website is deployed and viewable</li> </ul>
	24	<ul style="list-style-type: none"> <li>• Tutorials</li> <li>• Spiffy up webpage design (CSS)</li> <li>• Finalize Website design</li> <li>• Deployment <ul style="list-style-type: none"> <li>◦ Bug fixes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Web page design will be finalized</li> <li>• Website is finalized</li> </ul>