Criterion B: Record of Tasks

Task number	Planned action	Planned outcome	Time estimate	Target completion date	Criterion
1	Brainstorm project ideas	Decide on a biology-integrated program that uses Java (Processing)	4 days	3/14/25	A
2	Define features and requirements	Decide on DNA/RNA input, translation, protein feature detection	3 days	3/18/25	A
3	Create GUI mockups	Draft layout for input boxes, buttons, and mutation interface	5 days	3/21/25	B
4	Set up Java Processing structure	Skeleton sketch with three PDE files (MainApp, LogicUI, GlobalsUtilities)	3 days	3/26/25	C
5	Implement DNA and RNA classes	Transcribe and translate input sequences	1 day	3/29/25	C
6	Implement Protein class and feature detection	Analyze amino acid patterns and return protein features	3 days	3/30/25	C
7	Build mutation interface	Allow point, deletion, and insertion mutations with visual	5 days	4/2/25	C

		comparisons			
8	Add codon chart	Enable full codon-to-amino acid chart in GUI	3 days	4/7/25	C
9	Add protein-only analysis screen	Allow direct protein input (3-letter format)	1 day	4/10/25	C
10	Add wrapped text and column layout for features	Display long results clearly in a wrapped layout	1 day	4/11/25	C
11	Implement 2D array comparison logic	Compare original vs mutated protein sequences using 2D array	3 days	4/12/25	C
12	Final debugging and exception handling	Prevent invalid inputs and handle edge cases	1 day	4/15/25	D
13	Generate UML diagram and documentation	Visualize class structure and complete Criterion B and C sections	2 days	4/16/25	B, C
14	Prepare final export and video demonstration	Export project files, create video, and submit IA	1 day	4/18/25	D