Testing

Black Box Testing

1. Registration

Location	Login Interface → Register Interface

a. General cases

ID	Input	Oracle	Log
#1	Register with valid username, email address and password	System redirects to Project List Page.	System redirects to Project List Page.
#2	Register without populating username, email address, password and/or confirm password fields	System displays error message, "Fill up all the fields!" prompting user.	System displays error message, "Fill up all the fields!" prompting user.
#3	Register with invalid email address format	System displays error message, "Enter a valid email address!" prompting user to re-enter email address.	System displays error message, "Enter a valid email address!" prompting user to re-enter email address.
#4	Register with an existing email address	System displays error message "email address already taken!" prompting user to change their username.	System displays error message "email address already taken!" prompting user to change their username.

#5	Registers with an existing username	System displays error message "username already taken!" prompting user to change their username.	System displays error message "username already taken!" prompting user to change their username.
#6	Registers without meeting password criteria	System displays error message " Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters." prompting user to choose another password that follows the criteria.	System displays error message "Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters." prompting user to choose another password that follows the criteria.
#7	Registers with different inputs in "Password" and "Confirm Password" fields	System displays error message, "Passwords do not match!" prompting user to recheck.	System displays error message, "Passwords do not match!" prompting user to recheck.

b. Specific cases

ID	Username	Email	Password	Confirm Password	Expected Output	Test Result
#1	{Empty}	{Empty}	{Empty}	{Empty}	Error! Fill up all the fields!	Error! Fill up all the fields!
#2	{Empty}	username@gmail.com	P@ssw0rd	P@ssw0rd	Error! Fill up all the fields!	Error! Fill up all the fields!
#3	username	{Empty}	P@ssw0rd	P@ssw0rd	Error! Fill up	Error! Fill up

					all the fields!	all the fields!
#4	username	username@gmail.com	{Empty}	P@ssw0rd	Error! Fill up all the fields!	Error! Fill up all the fields!
#5	username	username@gmail.com	P@ssw0rd	{Empty}	Error! Fill up all the fields!	Error! Fill up all the fields!
#6	username	user@gmail	P@ssw0rd	P@ssw0rd	Error! Enter a valid email address!	Error! Enter a valid email address!
#7	registeredUsername	username@gmail.com	P@ssw0rd	P@ssw0rd	Error username already taken!	Error username already taken!
#8	username	registeredEmail@gmail.com	P@ssw0rd	P@ssw0rd	Error! Email address already taken!	Error! Email address already taken!
#9	username	username@gmail.com	password	password	Error! Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters.	Error! Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters.
#10	username	username@g	P@ssw0rd	P@ssw0rd	System	System

		mail.com			redirects to Project List Page.	redirects to Project List Page.
#11	username	username@g mail.com	P@ssw0rd	password	Error! Passwords do not match!	Error! Passwords do not match!

2. Login

Location	Login Interface

a. General cases

ID	Input	Oracle	Log
#1	Login with registered username and valid password	System redirects to Project List Page.	System redirects to Project List Page.
#2	Login with unregistered username	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.
#3	Login with registered username but invalid password	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.
#4	Login with invalid username and password	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.	System displays error message "There was a problem with your login. Please check your username and password and try again." prompting user to recheck their login credentials.
#5	Login with username or/and	System displays error	System displays error

	password field(s) unpopulated	message, "Fill up all the fields!" prompting user.	message, "Fill up all the fields!" prompting user.

b. Specific cases

ID	Username	Password	Expected Output	Test Result
#1	registered username	P@ssw0rd	System redirects to Project List Page.	System redirects to Project List Page.
#2	unregistered	P@ssw0rd	Error! There was a problem with your login. Please check your username and password and try again	Error! There was a problem with your login. Please check your username and password and try again
#3	registered username	password	Error! There was a problem with your login. Please check your username and password and try again	Error! There was a problem with your login. Please check your username and password and try again
#4	invalid username	password	Error! There was a problem with your login. Please check your username and password and try again	Error! There was a problem with your login. Please check your username and password and try again
#5	{Empty}	P@ssw0rd	Error! Fill up all the fields!	Error! Fill up all the fields!
#6	registered username	{Empty}	Error! Fill up all the fields!	Error! Fill up all the fields!
#7	{Empty}	{Empty}	Error! Fill up all the	Error! Fill up all the

			fields!	fields!

3. Forget Password

Location	Register Interface → Forgot Password Interface → Login Interface

a. General cases

ID	Input	Oracle	Log
#1	Change password with valid password	System displays password reset message and prompts user to return to login page.	System displays password reset message and prompts user to return to login page.
#2	Change password without meeting password criteria	System displays error message "Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters." prompting user to choose another password that follows the criteria.	System displays error message "Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters." prompting user to choose another password that follows the criteria.

b. Specific cases

ID	Password	Confirm Password	Expected Output	Test Result
#1	P@ssw0rd	P@ssw0rd	Password Reset! Your password has been successfully reset. Please log in with your updated credentials.	Password Reset! Your password has been successfully reset. Please log in with your updated credentials.
#2	password	password	Error!	Error!

			Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters.	Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters.
#3	P@ssw0rd	password	Error! Passwords do not match!	Error! Passwords do not match!
#4	{Empty}	{Empty}	Error! "Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters."	Error! "Password not strong enough! Password should include numbers, uppercase and lowercase letters and should have at least 8 characters."

4. Create New Project

Location	Project List Page

a. General cases

ID	Input	Oracle	Log
#1	Create a project with name	System creates a new Project and adds it to the list of projects.	Creates a new Project and adds it to the list of projects.
#2	Create a project with {Empty} name field	System displays error message, "Fill up all the fields!" prompting user.	System displays error message, "Fill up all the fields!" prompting user.

b. Specific cases

ID	Project Name	Expected Output	Test Result
#1	Project1	Project "Project1" gets added to the project list.	Project "Project1" gets added to the project list.
#2	{Empty}	Error! Input a title!	Error! Input a title!

5. Create New Task Card

Location	Kanban View Page

a. General cases

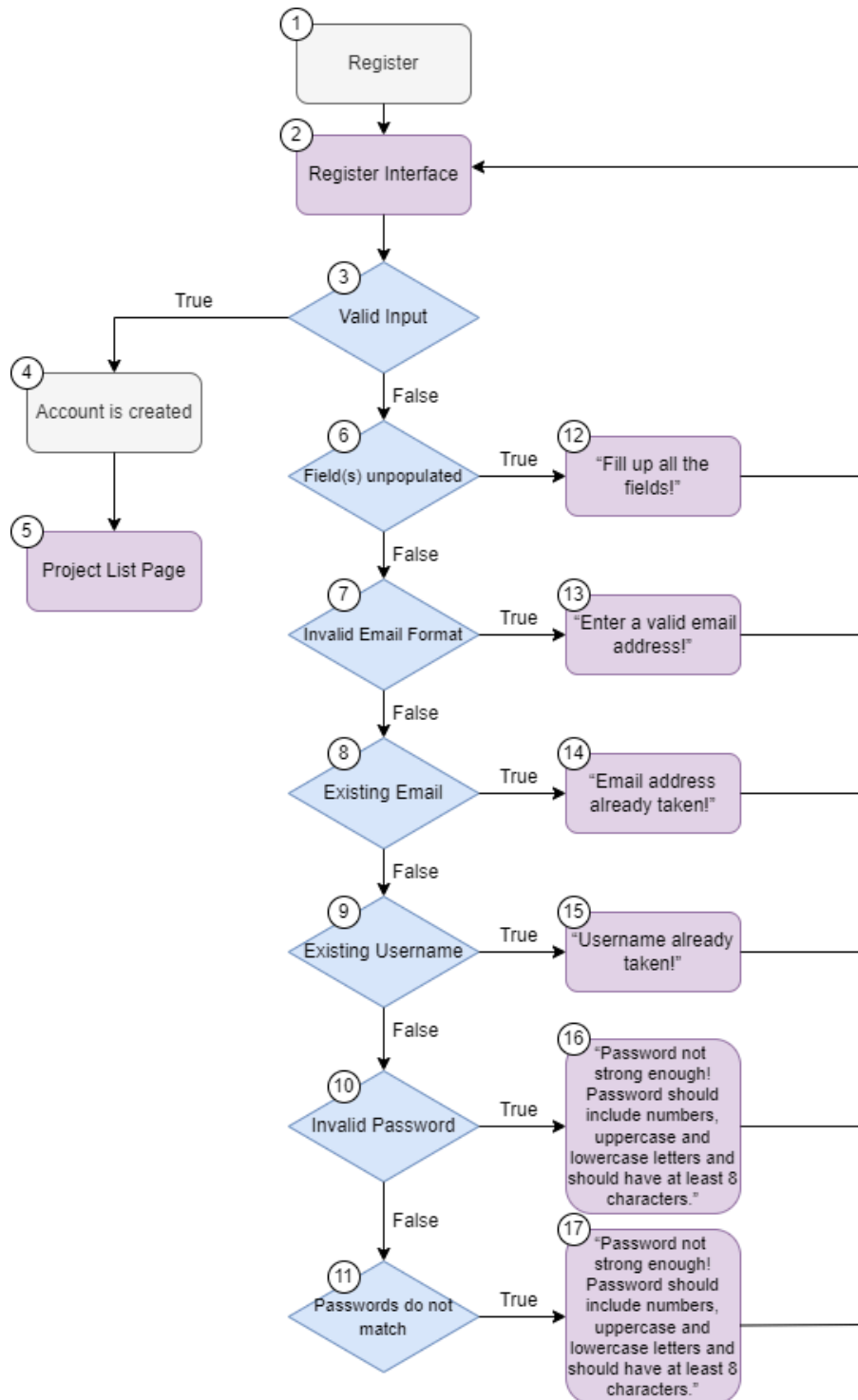| ID	Input	Oracle	Log
#1	Create a task in the preferred column	System creates a new task and adds the task to the preferred column.	System creates a new task and adds the task to the preferred column.
#2	Create a task with {Empty} title, description and date	System displays error message, "Input a title!" and prompts user.	System displays error message, "Input a title!" and prompts user.
#3	Create a task with title, description and {Empty} date	System displays error message, "Input a date between today and 2 years later!" and prompts user.	System displays error message, "Input a date between today and 2 years later!" and prompts user.

b. Specific cases

ID	Task Title	Task Description	Task Due Date	Expected Output	Test Result
#1	Task 1	{Empty}	16/4/2024 (Current date)	Task gets added to preferred column.	Task gets added to preferred column.
#2	{Empty}	abc	16/4/2024	Error! Input a title!	Error! Input a title!
#3	Task 1	abc	16/4/2024	Task gets added to preferred column.	Task gets added to preferred column.
#4	Task 1	abc	10/4/2024 (date before	Error! Input a date between today and 2	Error! Input a date between today and 2

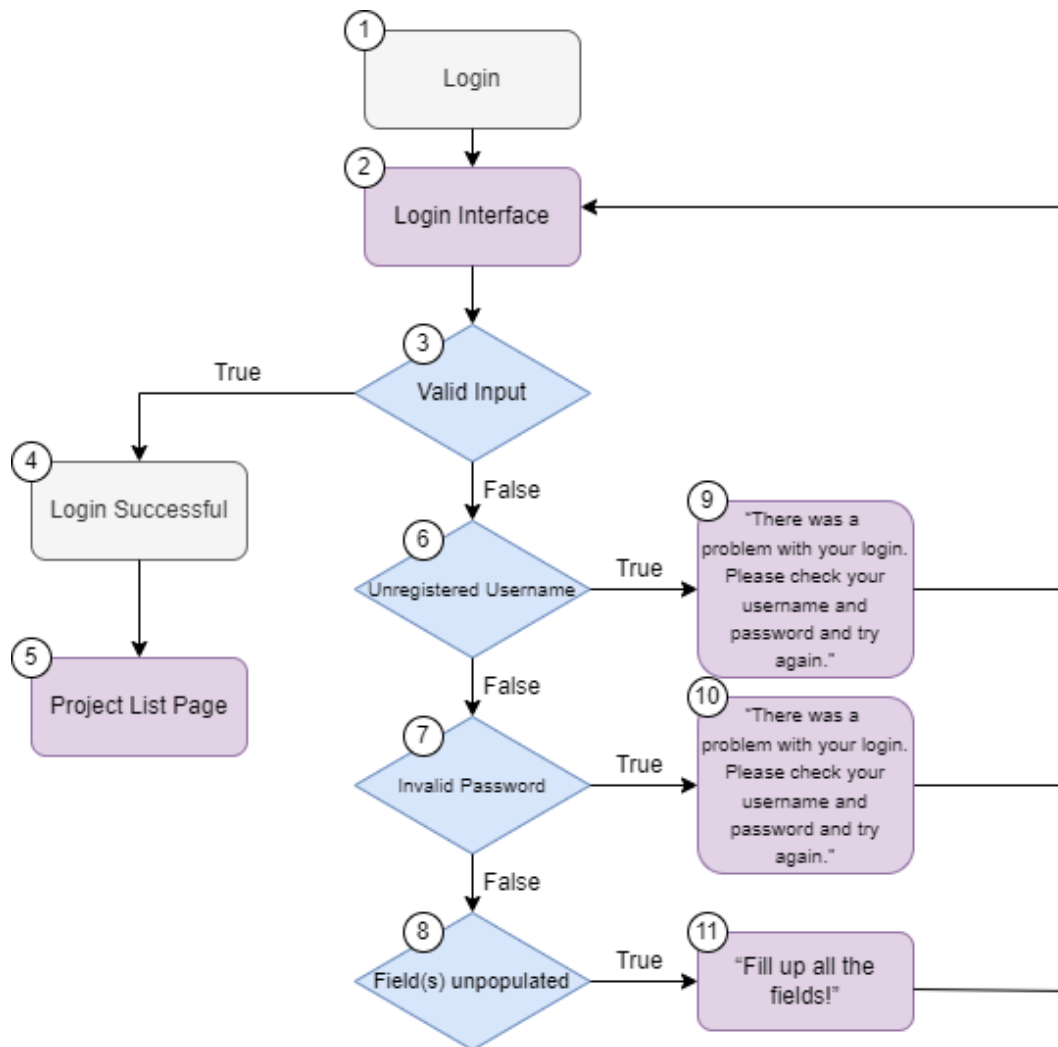|					
			current date)	years later!	years later!
#5	Task 1	abc	17/4/2026 (date beyond 2 years from current date)	Error! Input a date between today and 2 years later!	Error! Input a date between today and 2 years later!

White Box Testing

1. Registration

Cyclomatic complexity = 22 - 17 + 2 = 7

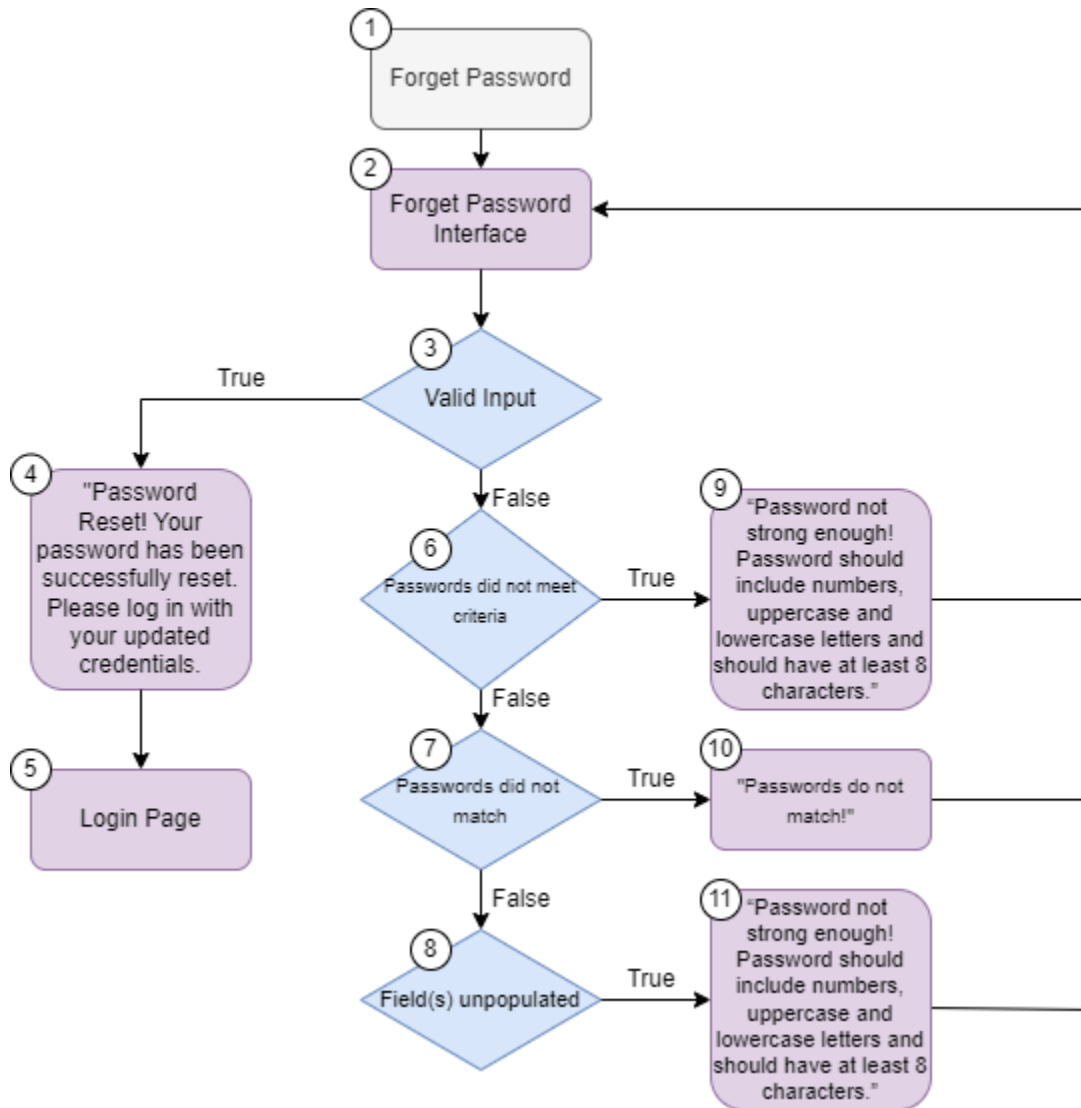| ID	Basis paths	Real execution paths
#1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
#2	1, 2, 3, 6, 12, 2, 3, 4, 5	1, 2, 3, 6, 12, 2, 3, 4, 5
#3	1, 2, 3, 6, 7, 13, 2, 3, 4, 5	1, 2, 3, 6, 7, 13, 2, 3, 4, 5
#4	1, 2, 3, 6, 7, 8, 14, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 14, 2, 3, 4, 5
#5	1, 2, 3, 6, 7, 8, 9, 15, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 9, 15, 2, 3, 4, 5
#6	1, 2, 3, 6, 7, 8, 9, 10, 16, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 9, 10, 16, 2, 3, 4, 5
#7	1, 2, 3, 6, 7, 8, 9, 10, 11, 17, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 9, 10, 11, 17, 2, 3, 4, 5

2. Login

Cyclomatic complexity = 13 - 11 + 2 = 4

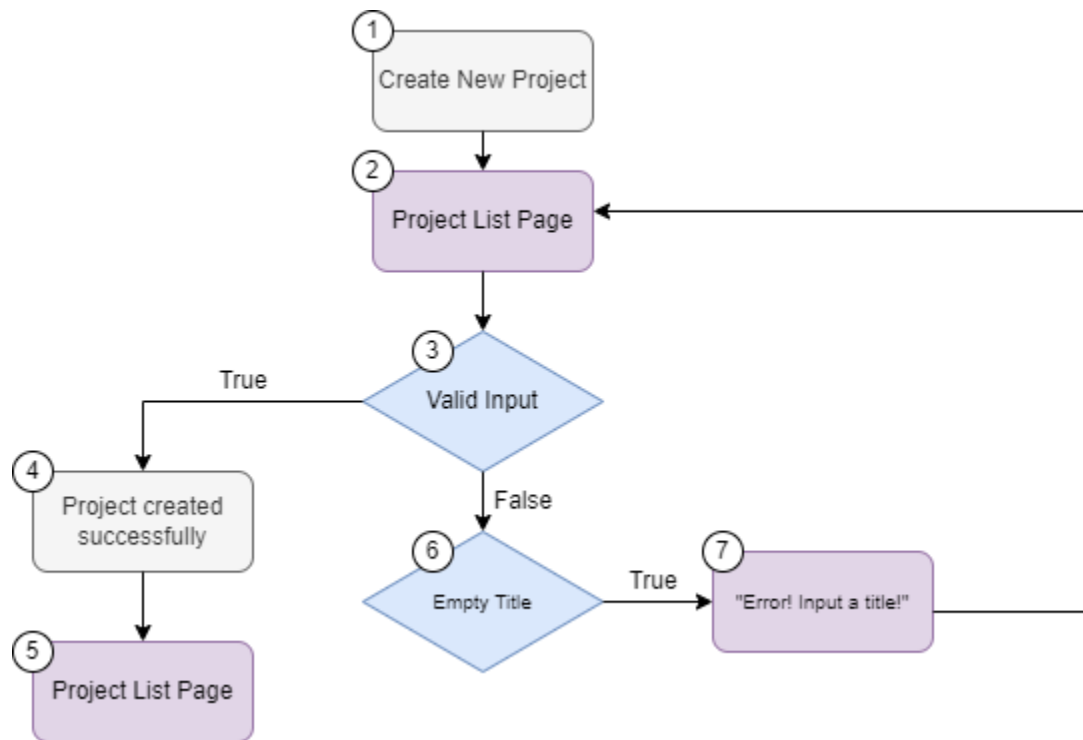| ID	Basis paths	Real execution paths
#1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
#2	1, 2, 3, 6, 9, 2, 3, 4, 5	1, 2, 3, 6, 9, 2, 3, 4, 5
#3	1, 2, 3, 6, 7, 10, 2, 3, 4, 5	1, 2, 3, 6, 7, 10, 2, 3, 4, 5
#4	1, 2, 3, 6, 7, 8, 11, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 11, 2, 3, 4, 5

3. Forget Password

Cyclomatic complexity = 13 - 11 + 2 = 4

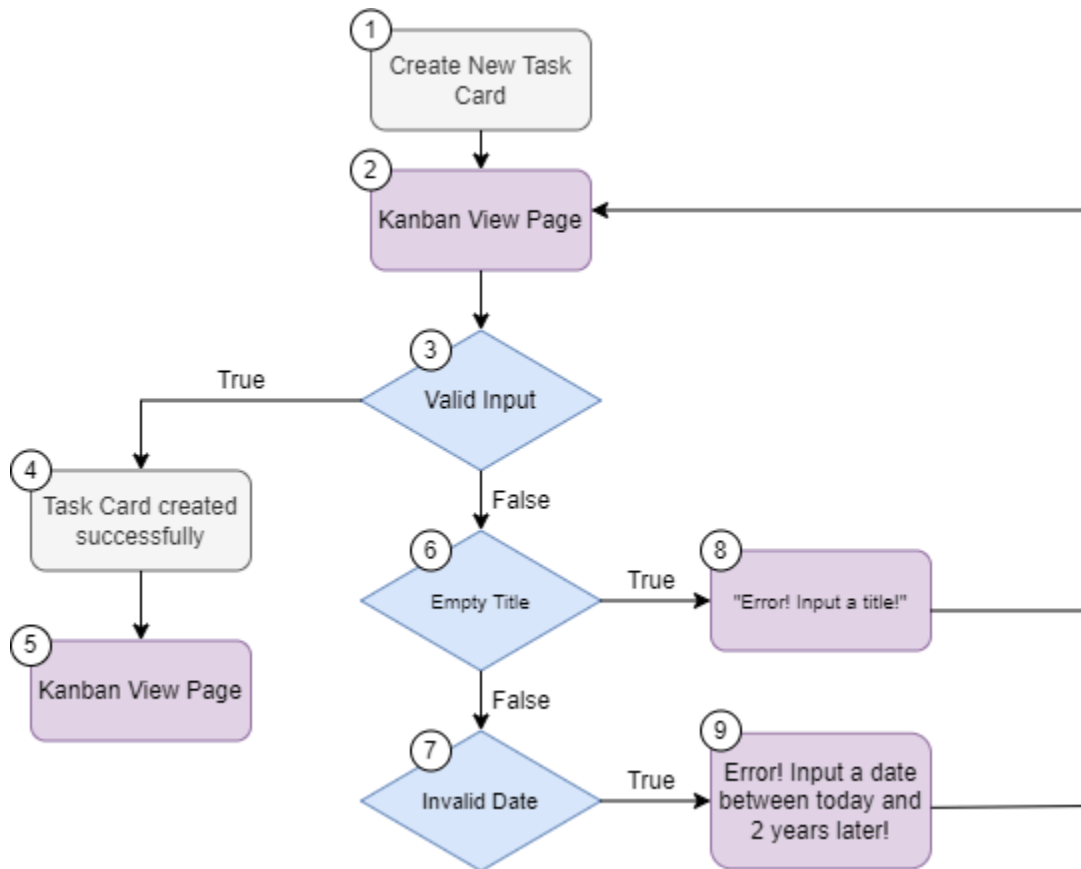| ID	Basis paths	Real execution paths
#1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
#2	1, 2, 3, 6, 9, 2, 3, 4, 5	1, 2, 3, 6, 9, 2, 3, 4, 5
#3	1, 2, 3, 6, 7, 10, 2, 3, 4, 5	1, 2, 3, 6, 7, 10, 2, 3, 4, 5
#4	1, 2, 3, 6, 7, 8, 11, 2, 3, 4, 5	1, 2, 3, 6, 7, 8, 11, 2, 3, 4, 5

4. Create New Project

Cyclomatic complexity = 7 - 7 + 2 = 2

ID	Basis paths	Real execution paths
#1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
#2	1, 2, 3, 6, 7, 2, 3, 4, 5	1, 2, 3, 6, 7, 2, 3, 4, 5

5. Create New Task Card

Cyclomatic complexity = 10 - 9 + 2 = 3

ID	Basis paths	Real execution paths
#1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
#2	1, 2, 3, 6, 8, 2, 3, 4, 5	1, 2, 3, 6, 8, 2, 3, 4, 5
#3	1, 2, 3, 6, 7, 9, 2, 3, 4, 5	1, 2, 3, 6, 7, 9, 2, 3, 4, 5