Black Box testing: Equivalence class and boundary value testing

Saving a trip - equivalence class testing

Test input			Expected output	Actual output
Trip Name	Origin location	Destination location		
USS to GbtB	Universal Studios Singapore	Gardens by the Bay	Trip successfully added	Trip successfully added
	Singapore Zoo	Merlion Park	“Please fill in all fields” error message	“Please fill in all fields” error message
Hogwarts to MBS		Marina Bay Sands	“Please fill in all fields” error message	“Please fill in all fields” error message
1	Suntec City		“Please fill in all fields” error message	“Please fill in all fields” error message

Edit name of a trip - equivalence class testing

Test input	Expected output	Actual output
Trip Name		
USS to GbtB	Name changed successfully	Name changed successfully
	“Name cannot be blank” error message	“Name cannot be blank” error message

View routes for a trip - equivalence class testing

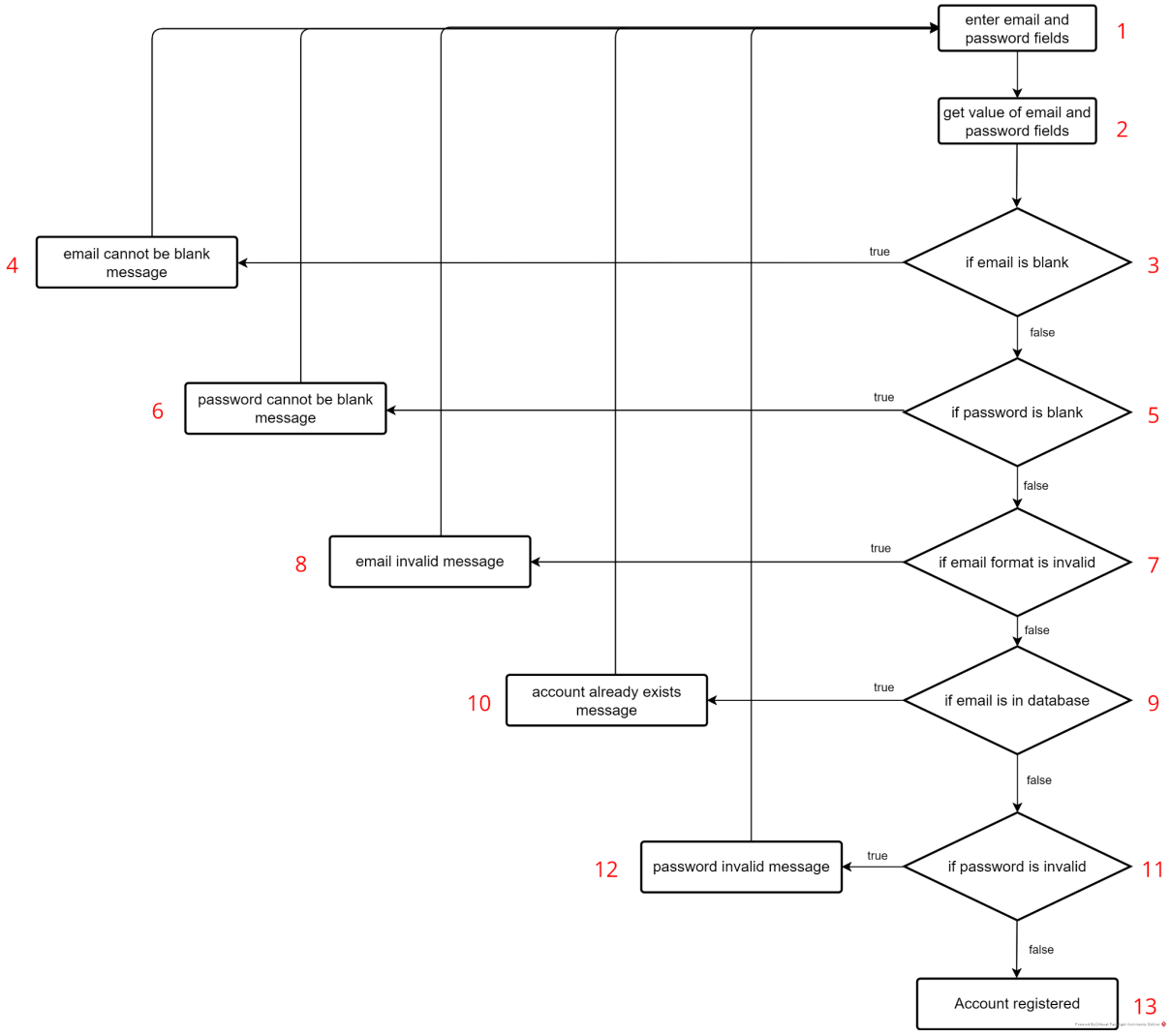
Test input		Expected output	Actual output
Internet connection	API key		
Yes	Valid	Route for the trip can be displayed for all modes of transport.	Route for the trip can be displayed for all modes of transport.
No	Valid	“Network request failed” error message	“Network request failed” error message
Yes	Invalid	“Missing API Key” error message	“Missing API Key” error message

Editing the price of a trip - equivalence class testing + boundary value testing

Test case (0 <= Valid price <= 100)	Test input	Expected output	Actual output
Lower boundary	0	Successful editing of price	Successful editing of price
Upper boundary	100	Successful editing of price	Successful editing of price
Just below lower boundary	-0.01	“Price cannot be negative” message	“Price cannot be negative” message
Just above upper boundary	100.01	“Price must be $100 or less” message	“Price must be $100 or less” message

White Box testing - Basis path testing

Registering for an account

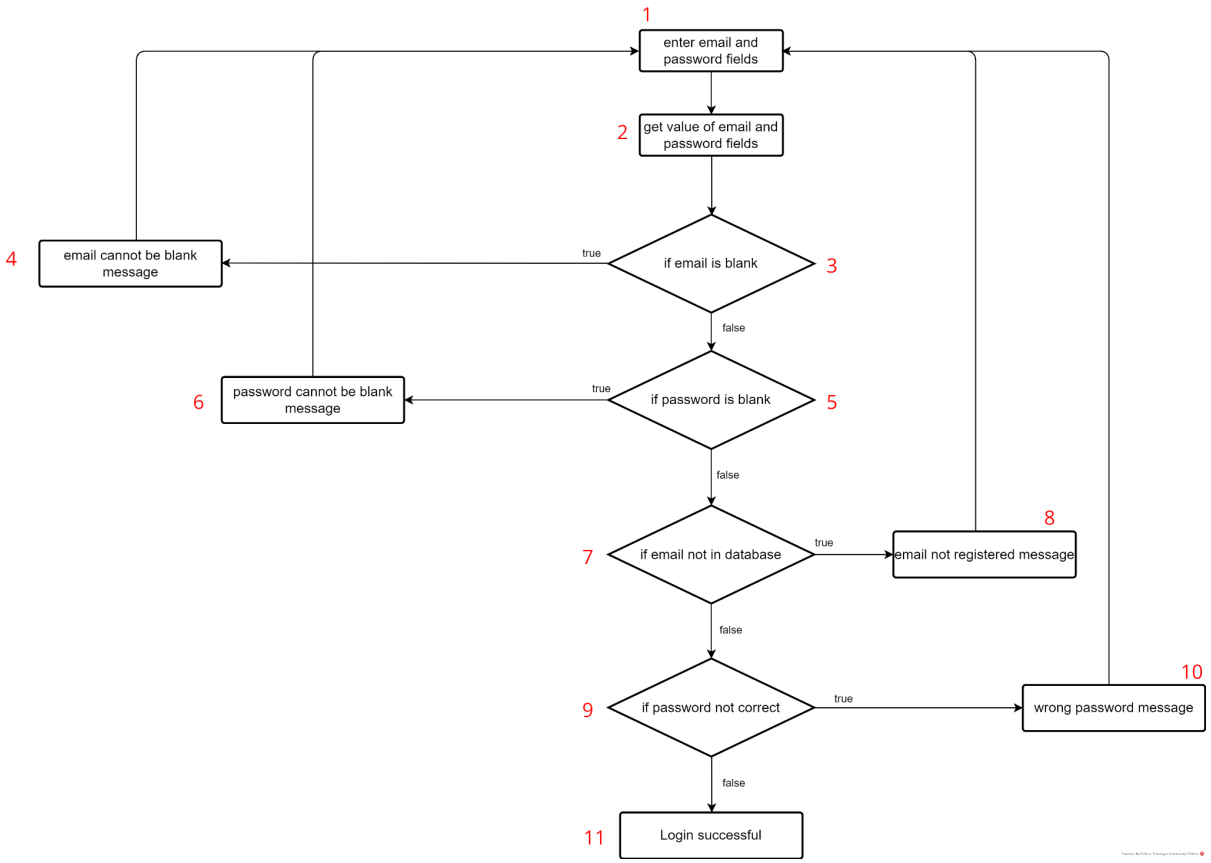


Cyclomatic complexity = 5 binary decision points + 1 = 6

We need 6 basis paths.

Path no.	Path	Email	Password	Email format invalid	Email already registered	Password invalid
Path 1 (baseline)	1,2,3,5,7,9,11,13	jack3141@gmail.com	Jack123!	No	No	No
Path 2	1,2,3,4,1,2,3,5,7,9,11,13	(Blank)	Jack123!	–	–	–
Path 3	1,2,3,5,6,1,2,3,5,7,9,11,13	jack3141@gmail.com	(Blank)	–	–	–
Path 4	1,2,3,5,7,8,1,2,3,5,7,9,11,13	jack3141	Jack123!	Yes	–	–
Path 5	1,2,3,5,7,9,10,1,2,3,5,7,9,11,13	burneremail@gmail.com	Burneremail123!	No	Yes	–
Path 6	1,2,3,5,7,9,11,12,1,2,3,5,7,9,11,13	jack3141@gmail.com	jack12	No	No	Yes

Login into the application



Cyclomatic complexity = 4 binary decision points + 1 = 5

We need 5 basis paths.

Path no.	Path	Email	Password	Email already registered	Entered password matches registered password
Path 1 (baseline)	1,2,3,5,7,9,11	jack3141@gmail.com	Jack123!	Yes	Yes
Path 2	1,2,3,4,1,2,3,5,7,9,11	(Blank)	Jack123!	–	–
Path 3	1,2,3,5,6,1,2,3,5,7,9,11	jack3141@gmail.com	(Blank)	Yes	–
Path 4	1,2,3,5,7,8,1,2,3,5,7,9,11	jill1618@gmail.com	Jillery123!	No	–
Path 5	1,2,3,5,7,9,10,1,2,3,5,7,9,11	jack3141@gmail.com	Random123!	Yes	No