Black Box Testing (Student Side)

1]. Student Login :-

- Objective : To verify and test the login functionality form student side.

- Preconditions : The user must have access to the academix portal.

- Validity checks and Equivalence partitions:

SL1 - Student must belong to the organization.

SL2 - Email field must not be blank or empty.

SL3 - The email field only accepts only organization email addresses.

SL4 - The password field must not be blank or empty.

SL5 - The (email, password) combination should exist in database else you need to register.

NOTE : Status=Pass if (Output=Expected output)

In this functionality, 3 error displays

1). "Please enter the correct Credentials"(E1)

2). "Please fill out this field"(E2)

3). "Please enter a valid daiict email address"(E3)

4). "Please include @ in email address, an @ is missing"(E4)

--> If success, user redirected to dashboard.(P)

- Test cases and boundary value analysis :

Test Case ID	Description	Input Email	Input Password	Expected Output	System Output	Status
TC_1	Valid student login 1.	202101030@daiict.ac.in	chaitanya	Redirect to student dashboard.	P	Pass
TC_2	Student with blank email (SL2)	" "	gtkqx12d	Error: Email field cannot be blank.	E2	Pass
TC_3	Student with blank password. (SL4)	202101021@daiict.ac.in	" "	Error: Password field cannot be blank.	E2	Pass
TC_4	Student with invalid organization (SL1)	prateek@iitr.ac.in	pateek12w	Error: Student does not belong to the organization.	E3	Pass
TC_5	Student with invalid email	thisissampletext	valid_pass	Error: Invalid	E4	Pass

	format. (SL3)			email format.		
TC_6	Student with non-organization email. (SL1)	TryThis123@gmail.com	tt123	Error: Only organization emails are accepted.	E3	Pass
TC_7	Student with incorrect password.	202101030@daiict.ac.in	bhupendra_Jogi	Error: Incorrect password.	E1	Pass
TC_8	Non-registered student login (SL5)	202101113@daiict.ac.in	Rid@m420	Error: User needs to register first.	E1	Pass
TC_9	Valid student login 2.	202101050@daiict.ac.in	corteX#12	Redirect to student dashboard.	P	Pass
TC_10	Non-registered student login (SL5)	202202033@daiict.ac.in	gdfh#1234	Error: User needs to register first.	E1	Pass
TC_11	Blank Information. (SL2+SL4)	" "	" "	Error: Email and password field can't be blank.	E2	Pass
TC_12	Student with invalid format (SL3)	ljsnvkjdnf sc	dcsc@e23	Error: Invalid email format.	E4	Pass
TC_13	Invalid format and blank (SL3+SL4)	jfwvegcyd2323	" "	Error: Invalid email format.	E4	Pass
TC_14	Valid email format and blank (SL4)	332424@daiict.ac.in	" "	Error: Password field cannot be blank.	E2	Pass
TC_15	Different organization trying to login (SL1)	Godspeed12@pdeu.ac.in	#32@dcc2	Error: Student does not belong to the organization.	E3	Pass

TC_16	No email with valid password (SL2)	" "	dsd3@f34	Error: Email field cannot be blank.	E2	Pass

2]. Student registration :-

- Objective : To test and verify the student registration process .
- Preconditions : None.
- Validity checks and Equivalence partitions:

SR1 - First name must not be blank or empty.

SR2 - Middle name must not be blank or empty.

SR3 - Last name must not be blank or empty.

SR4 - Email field must not be blank or empty.

SR5 - Batch must not be blank or empty.

SR6 - Batch must only be in numbers, not alphabets or other characters.

SR7 - Branch must not be blank or empty.

SR8 - Program must not be blank or empty.

SR9 - Enter password field must not be blank or empty.

SR10 - Confirm password field must not be blank or empty.

SR11 - Enter password and Confirm password must match to register.

SR12 - Password length must be at least 8 characters.

SR13 - Email should be organization email.

SR14 - Email format should be proper in email field

SR15 - Password must contain atleast one uppercase, one lowercase, one digit and one special character

NOTE : S_Reg = Successful registration, E_Reg = Error in registration, P=Pass, F=Fail.

- Test cases and boundary value analysis :

Test Case	Description	Validity Check	Input	Expected Output	System Output	Status
SR_TC1	To verify successful registration	Valid data for all fields	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDf2fu" Confirm Password="#$abDf2fu"	S_Reg	S_Reg	P
SR_TC2	To test registration with blank first name	Blank first name (SR1)	First name = ----- Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDfff2" Confirm Password="#$abDfff2"	E_Reg	E_Reg	P
SR_TC3	To test registration with blank middle name	Blank middle name (SR2)	First name = "Akhil" Middle name = ----- Last name = "Goenka" Email = "id1@daiict.ac.in"	E_Reg	E_Reg	P

			Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$aDfff3" Confirm Password="#$aDfff3"			
SR_TC4	To test registration with blank last name	Blank last name (SR3)	First name = "Akhil" Middle name = "J" Last name = ----- Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDff3" Confirm Password="#$abDff3"	E_Reg	E_Reg	P
SR_TC5	To test registration with blank email	Blank email (SR4)	First name = "Bhupendra" Middle name = "W" Last name = "Jogi" Email = ----- Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDff3" Confirm Password="#$abDff3"	E_Reg	E_Reg	P
SR_TC6	To test registration with blank batch	Blank batch (SR5)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = ----- Branch = "BTech" Program = "ICT" Enter Password="#$abDff3" Confirm Password="#$abDff3"	E_Reg	E_Reg	P
SR_TC7	To test registration with non-numeric batch	Non-numeric batch (SR6)	First name = "Bhupendra" Middle name = "J" Last name = "Jogi" Email = "id1@daiict.ac.in" Batch = 20ad3 Branch = "BTech" Program = "ICT" Enter Password="#$abDfu3" Confirm Password="#$abDfu3"	E_Reg	E_Reg	P
SR_TC8	To test registration with blank branch	Blank branch (SR7)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = 2022 Branch = ----- Program = "ICT"	E_Reg	E_Reg	P

			Enter Password="#$abDfu3" Confirm Password="#$abDfu3"			
SR_TC9	To test registration with blank program	Blank program (SR8)	First name = "Bhupendra" Middle name = "J" Last name = "Jogi" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = ----- Enter Password="#$abDfu3" Confirm Password="#$abDfu3"	E_Reg	E_Reg	P
SR_TC10	To test registration with blank password	Blank password (SR9)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password = ----- Confirm Password="#$abDfu3"	E_Reg	E_Reg	P
SR_TC11	To test registration with blank confirm password	Blank confirm password (SR10)	First name = "Bhupendra" Middle name = "J" Last name = "Jogi" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDffu3" Confirm Password = -----	E_Reg	E_Reg	P
SR_TC12	To test registration with mismatch passwords	Mismatch password and confirm password (SR11)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "id1@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDffu3" Confirm Password="#$afju3"	E_Reg	E_Reg	P
SR_TC13	To test blank fields together.	Blank spaces.	First name = "Akhoda" Middle name = "J" Last name = ----- Email = "id1@daiict.ac.in" Batch = ----- Branch = "BTech" Program = "ICT" Enter Password="#$abDfff" Confirm Password="#$abDfff"	E_Reg	E_Reg	P

SR_TC14	To test multiple blank spaces.	Blanks spaces.	First name = "Vikram" Middle name = ----- Last name = "Goenka" Email = ----- Batch = 2022 Branch = "BTech" Program = ----- Enter Password=----- Confirm Password="#$ab3ffj"	E_Reg	E_Reg	P
SR_TC15	To test different email other than organization.	Different email than organizati on email. (SR13)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "df1@iitr.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDf3f" Confirm Password="#$abDf3f"	E_Reg	E_Reg	P
SR_TC16	To test wrong email format	Wrong email format. (SR14)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "casjhcb328423" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$abDf3fu" Confirm Password="#$abDf3fu"	E_Reg	E_Reg	P
SR_TC17	To test wrong email format with blank spaces	Wrong email with blank spaces (SR4+ SR14)	First name = ----- Middle name = "J" Last name = "Goenka" Email = "cascb33@gmail.com" Batch = 2022 Branch = ----- Program = ----- Enter Password="#$abDf3fu" Confirm Password="#$abDf3fu"	E_Reg	E_Reg	P
SR_TC18	To test wrong password format	Wrong password format (SR15)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "20223@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#fdsc" Confirm Password="#fdsc"	E_Reg	E_Reg	P
SR_TC19	To test wrong password format	Wrong password format (SR15)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "20223@daiict.ac.in"	E_Reg	E_Reg	P

			Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="12121212" Confirm Password="12121212"			
SR_TC19	To test wrong password format	Wrong password format (SR15)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "20223@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="abab3434" Confirm Password="abab3434"	E_Reg	E_Reg	P
SR_TC20	To test wrong password format	Wrong password format (SR15)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "20223@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#$l@l$i@" Confirm Password="#$l@l$i@"	E_Reg	E_Reg	P
SR_TC21	To test correct password format	Correct password format (SR15)	First name = "Akhil" Middle name = "J" Last name = "Goenka" Email = "20223@daiict.ac.in" Batch = 2022 Branch = "BTech" Program = "ICT" Enter Password="#123abcd" Confirm Password="#123abcd"	E_Reg	E_Reg	P

3]. Password Reset :-

- Objective : To verify the password reset process.
- Precondition : User should already posses an account. User needs to enter the his/her email, a link will be sent to the email for creating and confirming new password. By this process, password can be reset.
- Validity Checks and Equivalence Partitions :

PR1 - The input email can only be organization email, others would not be considered valid.

PR2 - The input email field cannot be blank.

PR3 - The Enter new password field cannot be empty.

PR4 - The Confirm new password field cannot be empty.

PR5 - Passwords cannot be less than 8 characters.

PR6 - New password and confirm password should match to reset password.

PR7 - Password must contain at-least one uppercase, one lowercase, one digit and one special character.

- Test cases and boundary value analysis :

Test Case ID	Test Case Description	Email	New Password	Confirm Password	Expected Result	System Output	Status
PR_T C01	Verify password reset with valid email	202101021 @daiict.ac.in	#123Abcd	#123Abcd	Password reset successfully.	Password reset successful	P
PR_T C02	Verify password reset with invalid email	csdc22733@ pdpu.ac.in	#123Pbcd	#123Pbcd	Error message.	Error : "Enter organization email"	P
PR_T C03	Verify password reset with blank email	" "	#123Xbcd	#123Xbcd	Error message.	Error : "Please fill out all fields"	P
PR_T C04	Verify password reset with valid email and blank new password	202101021 @daiict.ac.in	" "	#123Vbcd	Error message.	Error : "Please fill out all fields"	P
PR_T C05	Verify password reset with valid email and empty confirm password	202101030 @daiict.ac.in	#123Ghjk	" "	Error message:	Error : "Please fill out all fields"	P
PR_T C06	Verify password	202101032 @daiict.ac.in	#12Ac	#12Ac	Error message.	Error : "Minimum 8	P

					characters required for password"	
PR_T C07	Verify password reset with valid email and mismatched passwords	202101045 @daiict.ac.in	#123Wert	#123Dert	Error message:	Error : "Passwords do not match"	P
PR_T C08	Verify password reset with valid email and weak new password	202101044 @daiict.ac.in	$1234567	$123456	Error message.	Error : "Password must contain at-least one uppercase, one lowercase, one digit and one special character"	P
PR_T C09	Verify password reset with valid email and valid new password	202101067 @daiict.ac.in	123@Abcd	123@Abcd	Password reset successfully	Password reset successful	P
PR_T C10	Verify password reset with valid email and valid new long password	202101023 @daiict.ac.in	1234@AbC dEf$#	1234@AbCdE f$#	Password reset successfully	Password reset successfully	P

4]. Search bar :-

- Objective : To check the functioning of the search bar in different pages like Mycourses, OtherCourses, etc.
- Precondition : None.
- Validity checks and Equivalence partitions:

SB1 - The input can be any string, even "" blank string.

SB2 - If the sting matches any course name(s), that course(s) would be displayed, else nothing will be displayed.

NOTE : Every test case below is SB1+SB2

- Test cases and boundary value analysis :

Test Case ID	Description	Input Data	Expected Output	System Output	Status
SBTC_1	Search for a valid course in MyCourses	"Digital Communication"	Relevant course(s)	Available course card viewed	Pass
SBTC_2	Search for a valid course in OtherCourses	"IOT"	Relevant course(s)	Available course card viewed	Pass
SBTC_3	Search with a blank string in MyCourses	"" (empty string)	All available courses	All available course cards viewed	Pass
SBTC_4	Search with a blank string in OtherCourses	"" (empty string)	All available courses	All available course cards viewed	Pass
SBTC_5	Search for a course with special characters	"!@#$%^&*()"	No matching courses	Blank space	Pass
SBTC_6	Search for a course with numeric characters	"123456"	No matching courses	Blank space	Pass
SBTC_7	Search for a course with mixed characters	"Comp123"	Relevant course(s)	Available course card viewed	Pass
SBTC_8	Search with a long string	"jhbvjdhvjhbvjhdvj hfvjfhvbdfjhvbjdfh vjhbjwhbdjsdhbcjh bcjhbcsdhbjshcbjs hddbcjshdcbjsdhc jhsccscs"	No matching courses	Blank space	Pass

5]. Update Profile :-

- Objective : To verify and test the process of updating information for profile.
- Preconditions : User should be logged in and should already have an initial profile available.
- Validity checks and Equivalence partitions:

UP1 - First name should not be blank or empty.
UP2 - Batch should not be blank or empty.
UP3 - Branch should not be blank or empty.
UP4 - Program cannot be blank or empty.
UP5 - Branch and Program should not exceed size of 50.
UP6 - First name, middle name and last name cannot exceed size of 20.

- Test cases and boundary value analysis :

Test Case ID	Description	Input Data	Expected Output	System Output	Status
UPTC_1	Update profile with valid information	First Name: "Johnny" Middle Name: "Doe" Last Name: "Smith" Batch: "2022" Branch: "ICT" Program:"BTech"	Profile updated successfully	Profile updated successfully	Pass
UPTC_2	Update profile with empty first name (UP1)	First Name: ----- Middle Name: "Doe" Last Name: "Smith" Batch: "2022" Branch: "CSE" Program:"BTech"	Error message: "First name cannot be blank."	"Please fill in this field" message for first name.	Pass
UPTC_3	Update profile with empty middle name (UP2)	First Name: "John" Middle Name: ----- Last Name: "Rock" Batch: "2022" Branch: "ECE" Program:"BTech"	Profile updated successfully	"Please fill in this field" message for middle name.	Pass
UPTC_4	Update profile with empty last name	First Name: "John" Middle Name: "Dove" Last Name: ----- Batch: "2022" Branch: "Metullargy" Program:"BTech"	Profile updated successfully	"Please fill in this field" message for last name.	Pass
UPTC_5	Update profile with empty batch	First Name: "Bhupendra" Middle Name: "W" Last Name: "Jogi" Batch: -----, Branch: "BE" Program:"BTech"	Error message: "Batch cannot be blank."	"Please fill in this field" message for Batch.	Pass

UPTC_6	Update profile with empty branch (UP3)	First Name: "John" Middle Name: "Doe" Last Name: "Smith" Batch: "2022" Branch: ----- Program:"BTech"	Error message: "Branch cannot be blank."	"Please fill in this field" message for Branch.	Pass
UPTC_7	Update profile with long string for each field (UP6)	First Name: "Johhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhhhhhhhhhhhh hhhhhhhhhhhhhhhn" Middle Name: "Doe" Last Name: "Smith" Batch: "2022" Branch: "ICT" Program:"BTech"	Error message: "Input exceeds the allowed length."	"Character limit exceeded" for first name.	Pass
UPTC_8	Update profile with long string for last name. (UP6)	First Name: "Bhupendra" Middle Name: "W" Last Name: "Joooooooooooooooooooo ooooooooooooooooooooooo ooooooooooggggggggggggg gggggggggggggggggggggggg ggggggggggggiiiiiiiiiiiiiiiiiiiiiiiiiiii iiiiiiiiiiii" Batch: "2022" Branch: ----- Program:"BTech"	Error message: "Input exceeds the allowed length."	"Character limit exceeded" for last name.	Pass
UPTC_9	Long Branch name(UP5)	First Name: "John" Middle Name: "Dove" Last Name: ----- Batch: "2022" Branch: "Metullargy" Program:"vbhvbvhbdfvhbfd vhbdfvdvhdbvhdfbvhfjvhbdh fvbjdfhvbjhdfvbjhvbfdjhvfdjvj fdvdjfhvbdfjhvb" Program:"BTech"	Error message: "Input exceeds the allowed length."	"Character limit exceeded" for Program	Pass
UPTC_10	Long Program name(UP5)	First Name: "Johnny" Middle Name: "Doe" Last Name: "Smith" Batch: "2022" Branch: "ICT" Program:"sivfvbfdvbhfdvbhd fvbdfhvbdfhvbfdhvbdfhvbldf hvbldfkhvbdlfhvbdfhvbjdhbv hLDHLCASCHSAH"	Error message: "Input exceeds the allowed length."	"Character limit exceeded" for Program	Pass

UPTC_11	Long middle name with multiple blanks.	First Name: ----- Middle Name: "fjhbvjhbvhbdhdbkbckabwu yfucbeacbhbccsbcbd" Last Name: "Smith" Batch: ----- Branch: ----- Program:"BTech"	Error message: "Input exceeds the allowed length." and "first name cannot be blank" and more.	"Character limit exceeded" for Program "Please fill in this field" message	Pass
UPTC_12	Valid inputs	First Name: "Johnny" Middle Name: ----- Last Name: ----- Batch: "2022" Branch: "ICT" Program:"BTech"	Profile updated successfully	Profile updated successfully	Pass

6]. Assignments upload and edit :-

- Objective : To test and verify the uploading and editing of assignment from student side.
- Preconditions : Student should be logged into the system and student should be enrolled in at-least one course.
- Validity checks and Equivalence partitions:

AUE1 - Assignment cannot be submitted without choosing a file.
AUE2 - Assignment cannot be edited without submitting first.
AUE3 - Assignment cannot be edited without choosing a file.
AUE4 - Large files cannot be uploaded/submitted.

- Test cases and boundary value analysis :

Test Case	Objective	Validity Check	Expected Output	System Output	Status
AUE1_TC1	To verify the successful upload of an assignment	Choose a valid file and submit	Successful submission	Submission successful	Pass
AUE1_TC2	To test assignment submission without choosing a file	Submit without choosing a file	Error message displayed	"Please fill in this field" message displayed	Pass
AUE2_TC1	To verify the successful edit of a submitted assignment	Choose a valid file and submit edit	Successful edit	Successful edit	Pass
AUE2_TC2	To test assignment edit without submitting first	Try to edit without submitting	Error message displayed	"Please fill in this field" message displayed	Pass
AUE3_TC1	To verify the successful edit of an assignment with a new file	Choose a new valid file and submit edit	Successful edit	Successful edit	Pass
AUE3_TC2	To test assignment edit without choosing a file	Submit edit without choosing a new file	Error message displayed	"Please fill in this field" message displayed	Pass
AUE4_TC1	To verify that large files cannot be uploaded	Choose a file larger than the allowed size	Error message displayed	"File size exceeded" message displayed.	Pass

7]. Raise query :-

- Objective : To verify and test the functionality of raising a query in query section of the platform.
- Preconditions : User must be logged in and enrolled in at-least one course.
- Validity Checks and Equivalence partitions :

RQ1 - The query box shouldn't be blank.

RQ2 - Query box cannot accept empty text.

- Test cases and boundary value analysis :

Test Case	Objective	Validity Check	Input	Expected Output	System Output	Status
RQ0_TC1	To verify successful query submission	Non-blank query text	"Hello sir, what are the timings for lab"	Successful query submission	Query successfully submitted	Pass
RQ1_TC2	To test query submission with a blank query box	Blank query text	_____	Error message displayed	"Please fill out all fields" message displayed.	Pass
RQ2_TC1	To test query submission with empty text	Empty text in the query box	" "	Error message displayed	"Please fill out all fields" message displayed.	Pass

8]. Feedback :-

- Objective : To verify and test the feedback functionality for courses.
- Preconditions : User must be logged in and enrolled in at-least one course. User must not have submitted a feedback for same course earlier. A student can submit feedback of a particular course only once.
- Validity Checks and Equivalence partitions :

FB1 - The feedback box/section must not be blank.
FB2 - The feedback section must not contain empty text.

- Test cases and boundary value analysis :

Test Case ID	Test Case Description	Input	Expected Result	Status
FB_TC01	Verify feedback submission with valid feedback	"This was the best and the most informative course"	Feedback submitted successfully	Pass
FB_TC02	Verify feedback submission with blank feedback(FB1)	_____	Error message: Feedback cannot be blank	Pass
FB_TC03	Verify feedback submission with empty text(FB2)	" "	Error message: Feedback cannot be empty text	Pass
FB_TC04	Verify feedback submission for another course.	"The instructor were amazing and we got a lot to learn."	Feedback submitted successfully	Pass