

API Specifications

LOGIN

Name	Name	Name	Name	Response Code	Response	Remark
/	Root service, show first web page (index page)	GET	-	200	file: "index.html"	The first page is Index page with role selection
/login	Username, password, and role input	POST	{ "username": "user123", "password": "pass123", "role": "student"} }	200	JSON: { "message": "Login successful!", "user": { "username": "user123", "id": "s123", "role": "student"} }	Successful login
				400	JSON: {"error": "All fields are required."}	Missing required fields
				401	JSON: {"error": "Invalid username or password."}	Incorrect credentials
				500	JSON: {"error": "Database error."}	Server/Database failure

REGISTER

Name	Description	Method	Request	Response Code	Response	Remark
/register	Create an account	POST	{ "username": "user123", "password": "pass123", "role": "student", "studentId": "s123"} }	201	JSON: { "message": "Student registration successful!" }	Successful student registration
			{ "username": "user123", "password": "pass123", "role": "lecturer"} }	201	JSON: { "message": "Lecturer registration successful!" }	Successful lecturer registration
			{ "username": "user123", "password": "pass123", "role": "staff"} }	201	JSON: { "message": "Staff registration successful!" }	Successful staff registration

				{"username":"","password":"","role":""}	400	JSON: {"error": "All fields are required."}	Missing required fields	
				{"username":"user123", "password":"pass123", "role":"student"} (No Student ID)	400	JSON: {"error": "Student ID is required for student registration."}	Student ID missing	
				{"username":"user123", "password":"pass123", "role":"student", "studentId":"s123"}	400	JSON: {"error": "Student ID already exists."}	Duplicate Student ID	
				{"username":"user123", "password":"pass123", "role":"invalidRole"}	400	JSON: {"error": "Invalid role selected."}	Invalid role entry	
				Any request with database issues	500	JSON: {"error": "Error registering student."}	Database error on student	
				Any request with database issues	500	JSON: {"error": "Error registering lecturer."}	Database error on lecturer	
				Any request with database issues	500	JSON: {"error": "Error registering staff."}	Database error on staff	
Categories								
	Name	Description	Method	Request	Response Code	Response	Remark	
	/add-category	Add category	POST	{"category_id":"6", "category_name":"Laptop", "description":"For the student's presentation purpose"}	201	JSON: {"message": "Category added successfully"}	Successful category	
				{"category_id":"6", "category_name":"Laptop", "description":"For the student's presentation purpose"}	400	JSON: {"error": "All fields are required!"}	id, name and description are not filled	
				{"category_id":"6", "category_name":"Laptop", "description":"For the student's presentation purpose"}	500	JSON: {"error": "Database is not connected"}	Database error	
	/edit-category/:category_id	UPDATE	PUT	{"category_id":"1", "category_name":"Headsets", "description":"visual class purpose"}	201	JSON: {"message": "Category updated successfully"}	Successful update category	

				{ "name": "Laptop", "description": "A high-performance laptop for project work", "image_path": "/images/laptop.png", "status": "available", "category_id": 5, "created_by": 2 }	400	JSON:{"error": "All required fields!"}	values missed out	
				{ "name": "Laptop", "description": "A high-performance laptop for project work", "image_path": "/images/laptop.png", "status": "available", "category_id": 5, "created_by": 2 }	500	JSON:{"error": "Database error!"}	Database error	
	/edit-asset/ asset_id	Editing Asset to the database	PUT	{"asset_id": 3, "name": "Laptop", "description": "A high-performance laptop for project work", "image_path": "/images/laptop.png", "status": "available", "category_id": 5, "created_by": 2 }	201	JSON:{"message": "Asset edited successfully!"}	Asset added	
				{"asset_id": 3, "name": "Laptop", "description": "A high-performance laptop for project work", "image_path": "/images/laptop.png", "status": "available", "category_id": 5, "created_by": 2 }	404	JSON:{"error": "Asset not found!"}	Asset ID do not exist	

				{ "asset_id": 3, "name": "Laptop", "description": "A high-performance laptop for project work", "image_path": "/images/laptop.png", "status": "available", "category_id": 5, "created_by": 2 }	500	JSON:{"error": "Database error!"}	Database error	
	/disable- asset/: asset_id	Disabling Asset to the database	PUT	{ "asset_id": 11 }	201	JSON:{"message": "Asset disabled successfully!"}	Disabled assets	
				{ "asset_id": 11 }	404	JSON:{"error": "Asset not found!"}	Asset ID do not exist	
				{ "asset_id": 11 }	500	JSON:{"error": "Database error!"}	Database error	
	/disable- asset/: asset_id	Disabling Asset to the database	POST	{ "student_id": 101, "asset_id": 202, "borrow_date": "2025-04-01", "return_date": "2025-04-15", "student_reason": "For group project" }	201	JSON:{"message": "Asset request successfully!"}	Request assets	
				{ "student_id": 101, "asset_id": 202, "borrow_date": "2025-04-01", "return_date": "2025-04-15", "student_reason": "For group project" }	400	JSON:{"error": "Fields needed to filled."}	Fields required	

				{ "student_id": 101, "asset_id": 202, "borrow_date": "2025-04-01", "return_date": "2025-04-15", "student_reason": "For group project" }	400	JSON:{"error": "Borrow date must be today!"}	Borrow date required	
	/approve-or-disapprove	Approve or disapproving Asset to the database (LECTURER)	PUT	{ "request_id": 1, "status": "approved", "lecturer_id": 3, "reason": "Approved for project work" }	400	JSON:{"error": "ID must be lecturer, Invalid status!"}	Must be lecturer and must have a status	
				{ "request_id": 1, "status": "approved", "lecturer_id": 3, "reason": "Approved for project work" }	500	JSON:{"error": "Database error!"}	Database error	
	/dashboard/data	Dashboard display	Get		200		Result show in UI	
					500	JSON:{"error": "Database error!"}	Database error	
	/api/history	History	Get	{"userId": 1, "role": "student"}	200		History show in UI	
				{"userId": 1, "role": "student"}	500	JSON:{"error": "Database error!"}	Database error	
				{"userId": 1, "role": "student"}	400	JSON:{"error": "Missing user ID and role!"}	Error login	
				{"userId": 1, "role": "student"}	500	JSON:{"error": "Database error!"}	Database error	
	/api/return-asset	Asset Return	POST	{"assetId": 1, "returnedBy": "3"}	200	JSON:{"message": "Asset return successfully!"}	Assets show in UI	
				{"assetId": 1, "returnedBy": "3"}	400	JSON:{"error": "Missing user ID and role!"}	Error login	
				{"assetId": 1, "returnedBy": "3"}	500	JSON:{"error": "Database error!"}	Database error	
	/api/borrowed-asset	Returning the borrowed asset for the staff	Get		200			

					500	JSON:{"error": "Database error!"}	Database error	
	/api/request	Requesting asset	Get		200			
					500	JSON:{"error": "Database error!"}	Database error	
	/api/request	Requesting asset	POST	{ "userId": 1, "aID": 4, "brDate": "2025-03-31", "rtDate": "2025-04-15", "reason": "For project work" }	200	JSON:{"message": "Successfully request the assets!"}	Successfully request the assets	
				{ "userId": 1, "aID": 4, "brDate": "2025-03-31", "rtDate": "2025-04-15", "reason": "For project work" }	400	JSON:{"error": "All fields are required!"}	All fields are required	
				{ "userId": 1, "aID": 4, "brDate": "2025-03-31", "rtDate": "2025-04-15", "reason": "For project work" }	500	JSON:{"error": "Database error!"}	Database error	