



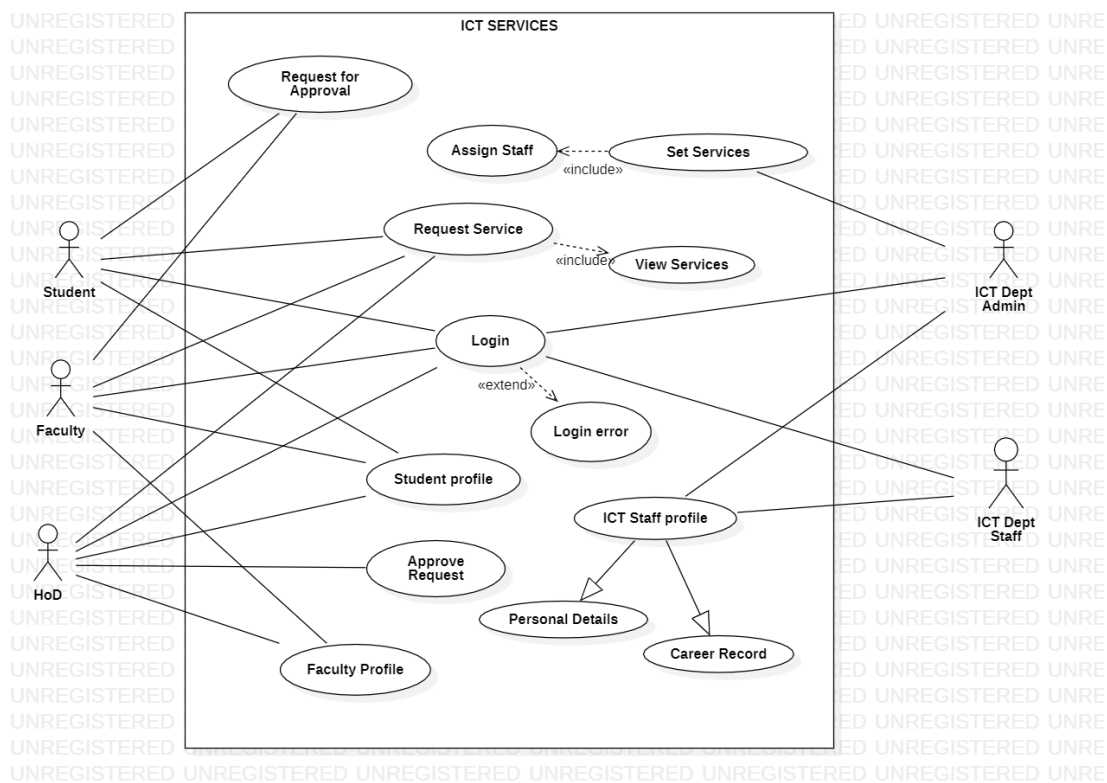
JAVA PROJECT REPORT INFORMATION AND COMMUNICATION TECHNOLOGY SERVICES

ABSTRACT:

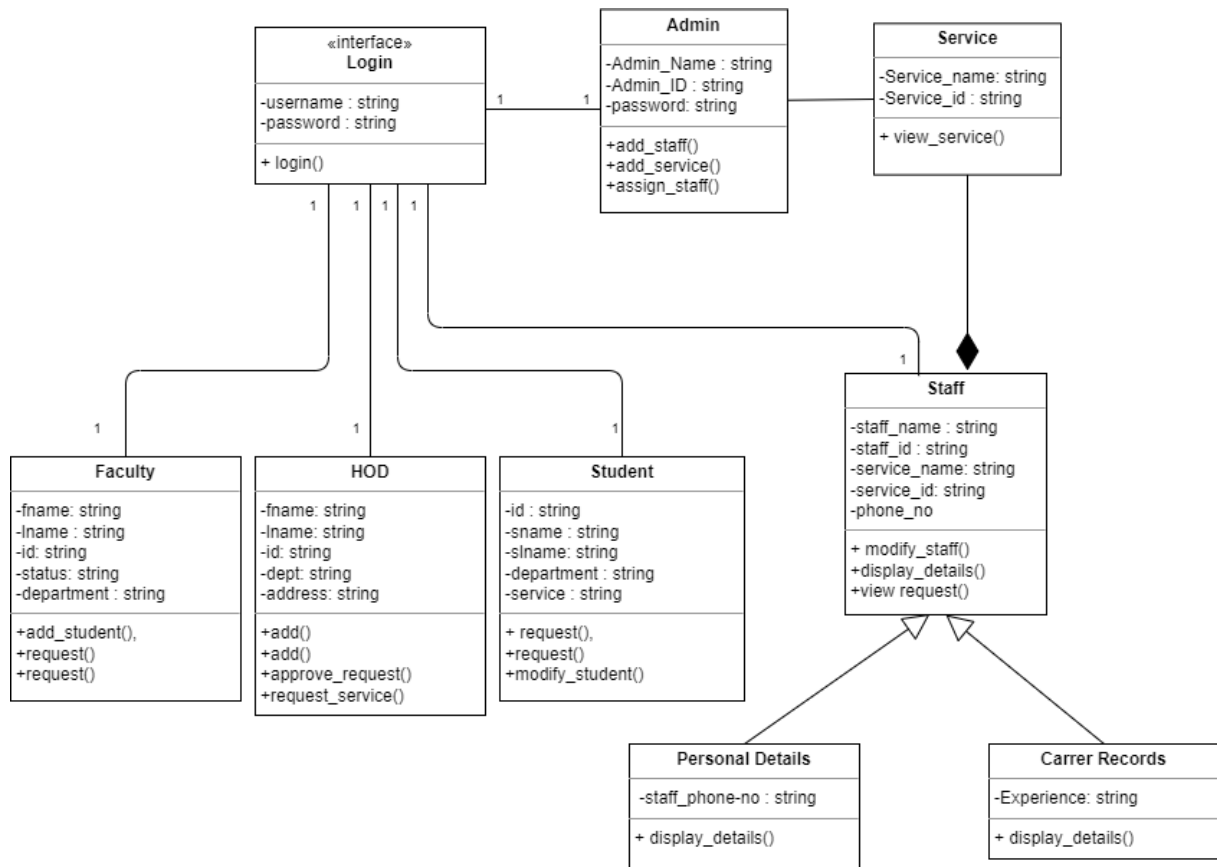
Our project aims to develop a system to allocate the various ICT services like software, type of hardware, network, multimedia, etc. to the college. Various clients like students, higher authorities, faculty can request service to the ICT service department. The ICT department has an admin and various staff to provide the services for the client. According to the client's request, experts of the requested service would be provided by the ICTS department to resolve the issue. The various services provided by the department are installation of software, repair computer parts like keyboard repair, CPU parts repair etc., improve network connectivity, multimedia services etc. Some of the constraints kept by the ICTS department are clients like students and faculty can place a request for the services only after a special approval from the higher authority(HoD) of their respective department. But the clients with a higher job position like the head of the department, principal, department coordinators, etc. of the college do not require any approval to request the services provided.



USE CASE DIAGRAM:



CLASS DIAGRAM:



FEATURES IMPLEMENTED:

Abstraction:

- Implemented a login interface
 - different users(admin,staff,hod,faculty and student) can login with their login credentials

Inheritance:

- Implemented a hierarchical inheritance
 - staff class is inherited by two classes personal details and career records.

Polymorphism:

- Implemented function overloading
 - request functions of faculty and staff for requesting service and requesting service is overloaded
 - add function of HOD for adding students and faculty is also overloaded.
- Implemented function overriding
 - display_details function of staff is overridden.

Encapsulation:

- Used packages,classes and objects to implement the code

User Defined Exception:

- Created a custom exception for checking whether the constraint for password is matched or not.

Final keyword:

- The password for admin login is fixed, the password entered by admin would be checked with the password set as final.

Java Swing:

- Implemented all graphical user interface design part using java swing concepts

Java JDBC

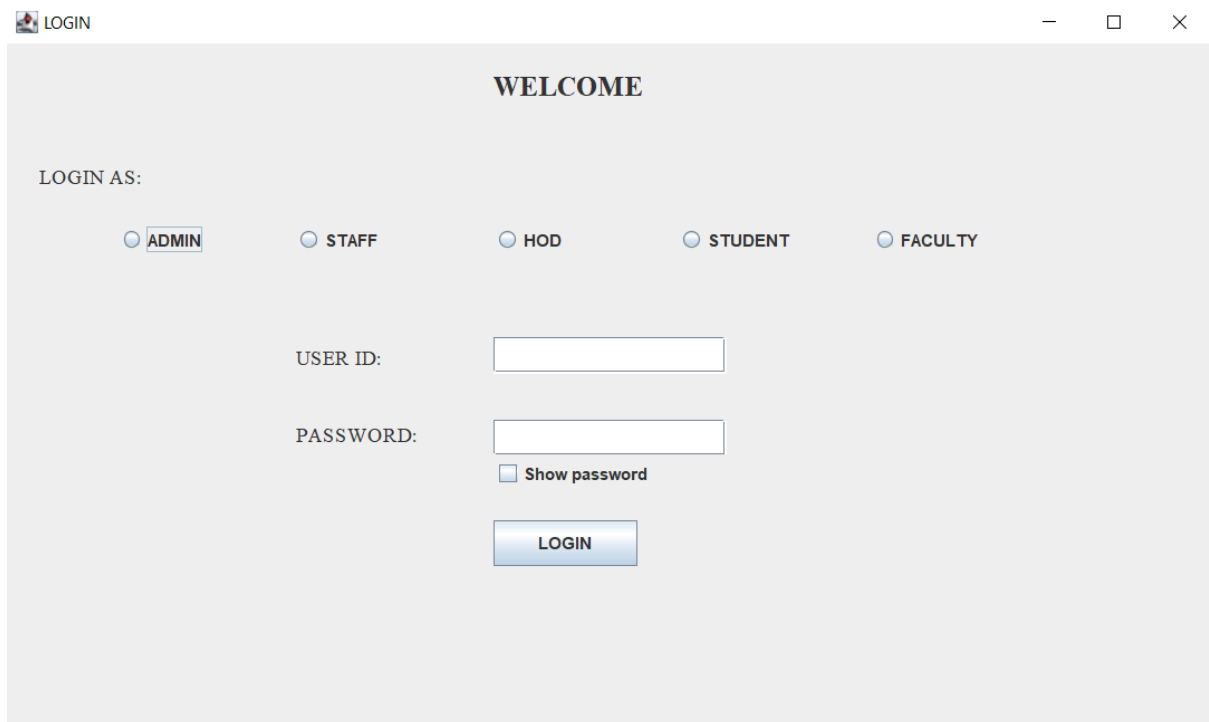
- All sql connections are made and successfully implemented the storage of data.

Composition

- A composite relation is established between staff and service.

GRAPHICAL USER INTERFACE

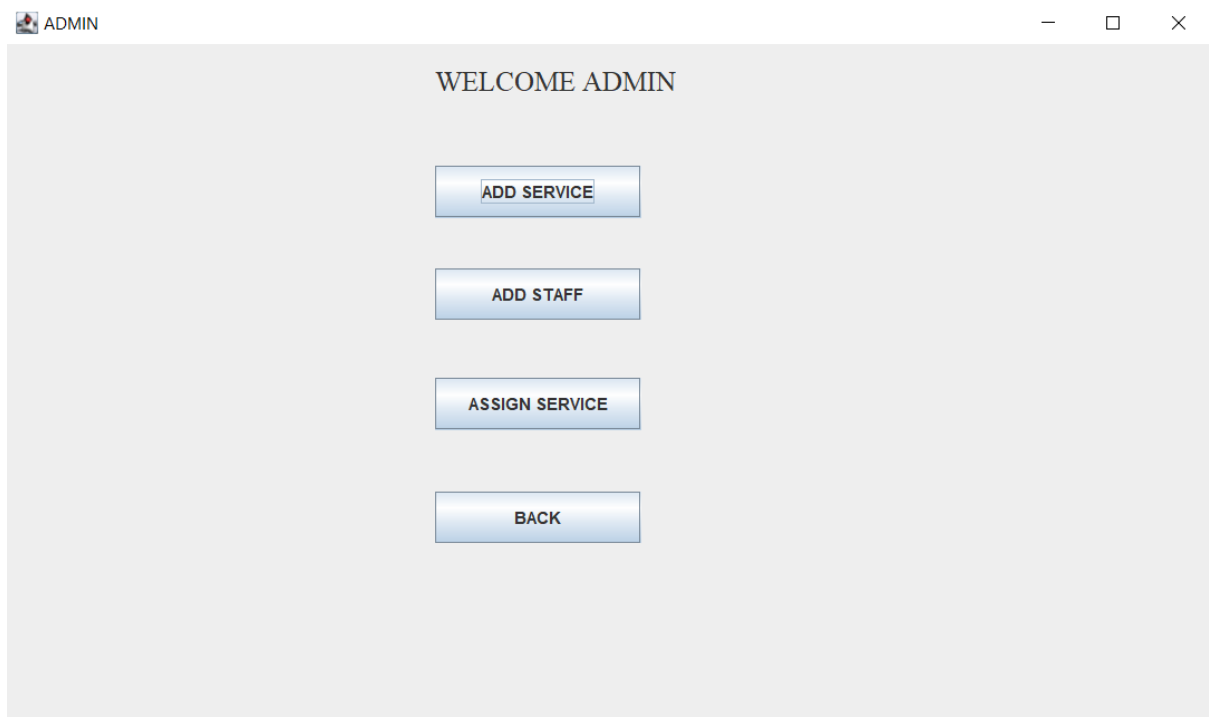
Login Page



The screenshot shows a window titled "LOGIN" with standard minimize, maximize, and close buttons. The main content area has a light gray background. At the top, the word "WELCOME" is centered. Below it, the text "LOGIN AS:" is followed by five radio button options: "ADMIN", "STAFF", "HOD", "STUDENT", and "FACULTY". The "ADMIN" option is selected. Below these options are two text input fields labeled "USER ID:" and "PASSWORD:". Under the "PASSWORD:" field is a checkbox labeled "Show password". At the bottom center is a blue "LOGIN" button.

Users can enter using their credentials. If credentials are wrong login error will occur. The password of the admin is set as final.


Admin and Functions



The screenshot shows a window titled "ADMIN" with standard minimize, maximize, and close buttons. The main content area has a light gray background. At the top, the text "WELCOME ADMIN" is centered. Below it are four blue buttons arranged vertically: "ADD SERVICE", "ADD STAFF", "ASSIGN SERVICE", and "BACK".

These functionalities of admin are to add staff and service and assign service.

Add service

 ADD SERVICE— □ ×

ENTER DETAILS

SERVICE ID:


NAME OF SERVICE:

BACK

ADD

Admin can provide the details and of service and data will be successfully stored in the database.

Add staff

 ADD STAFF— □ ×

ENTER DETAILS OF STAFF

STAFF ID:

STAFF NAME:

SERVICE ID:

PAYMENT:

SERVICE NAME:

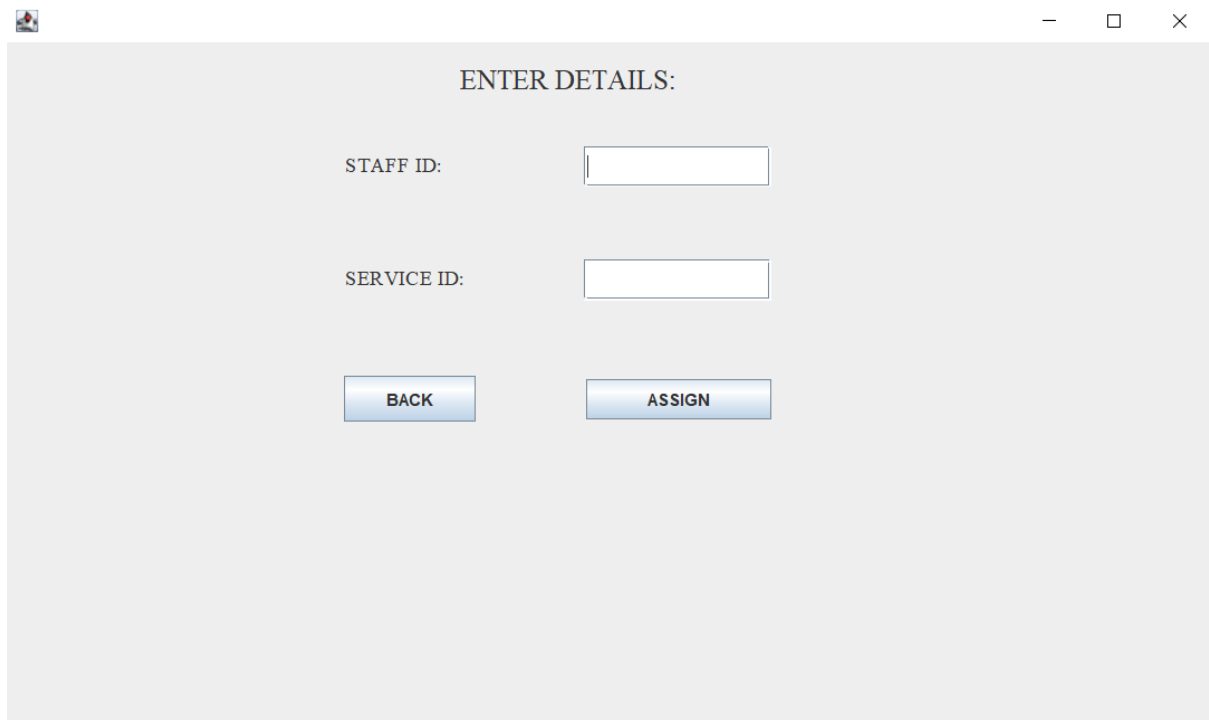
PHONE NO:

BACK

ADD

Admin can enter the details of staff to add and the details will be stored in the database.

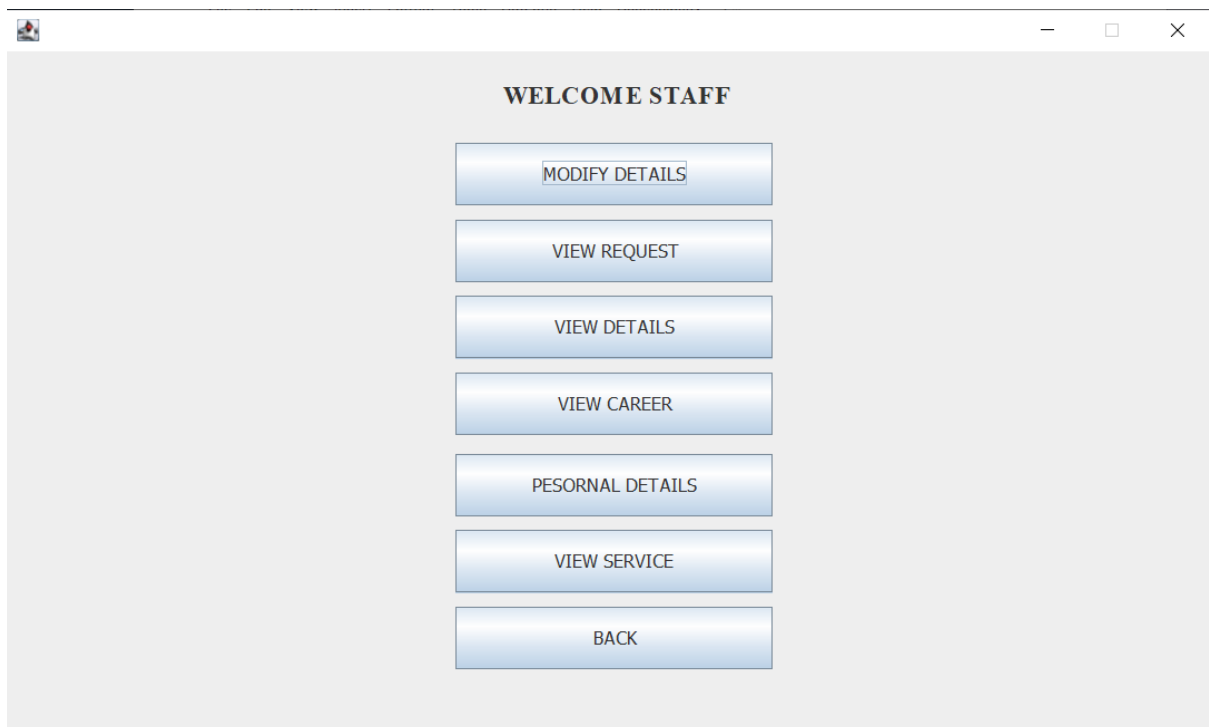
Assign Staff



A screenshot of a web application window titled "Assign Staff". The window has a standard OS-style title bar with a minimize button, a maximize button, and a close button. The main content area has a light gray background and is titled "ENTER DETAILS:". Below the title, there are two input fields. The first is labeled "STAFF ID:" and the second is labeled "SERVICE ID:". Below these fields are two buttons: "BACK" on the left and "ASSIGN" on the right. Both buttons are blue with white text and a slight gradient.

Admin can assign staff by giving the values and data will be stored in the database.

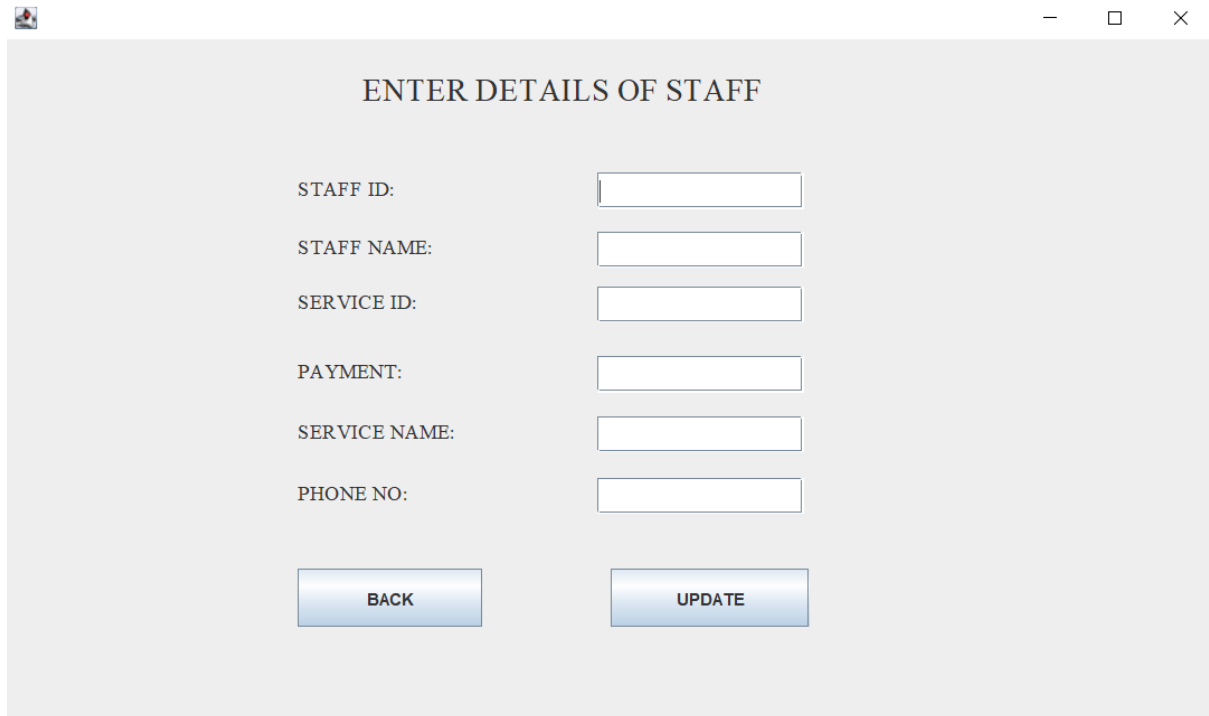
Staff and functions



A screenshot of a web application window titled "WELCOME STAFF". The window has a standard OS-style title bar with a minimize button, a maximize button, and a close button. The main content area has a light gray background and is titled "WELCOME STAFF". Below the title, there is a vertical stack of seven buttons. The buttons are labeled "MODIFY DETAILS", "VIEW REQUEST", "VIEW DETAILS", "VIEW CAREER", "PESORNAL DETAILS", "VIEW SERVICE", and "BACK". All buttons are blue with white text and a slight gradient.

The functionalities of staff are to modify their details, view the requests received, view their personal, official and career details..

Modify Staff



ENTER DETAILS OF STAFF

STAFF ID:

STAFF NAME:

SERVICE ID:

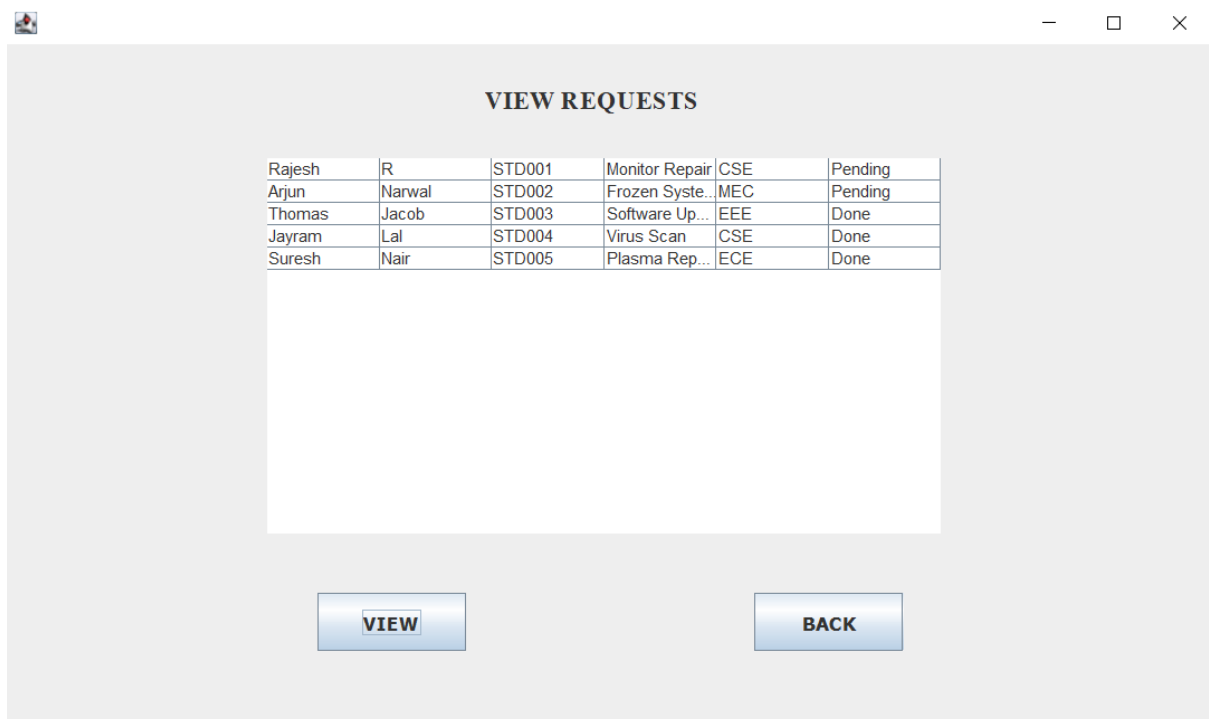
PAYMENT:

SERVICE NAME:

PHONE NO:

Staff can edit, modify their details and the new details will be saved in the database.

View requests

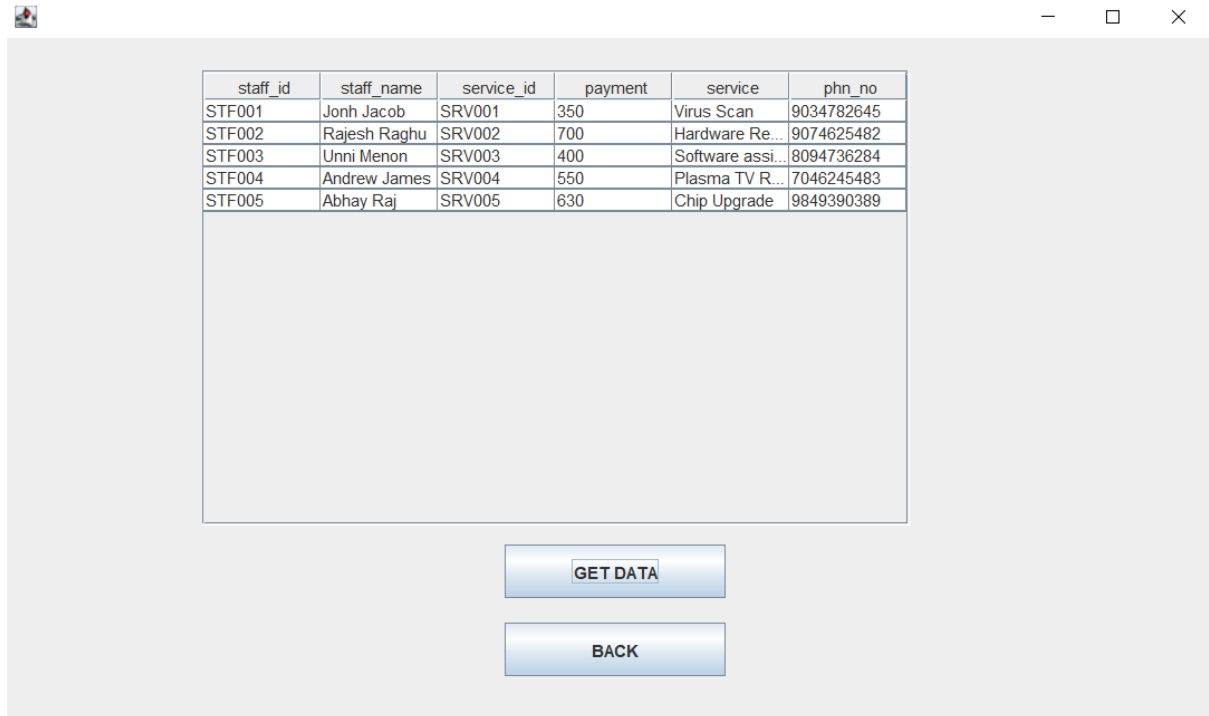


VIEW REQUESTS

Rajesh	R	STD001	Monitor Repair	CSE	Pending
Arjun	Narwal	STD002	Frozen Syste...	MEC	Pending
Thomas	Jacob	STD003	Software Up...	EEE	Done
Jayram	Lal	STD004	Virus Scan	CSE	Done
Suresh	Nair	STD005	Plasma Rep...	ECE	Done

Staff can view the received requests and current status.

View details



The screenshot shows a window titled "View details" with a table containing staff information. The table has six columns: staff_id, staff_name, service_id, payment, service, and phn_no. Below the table are two buttons: "GET DATA" and "BACK".

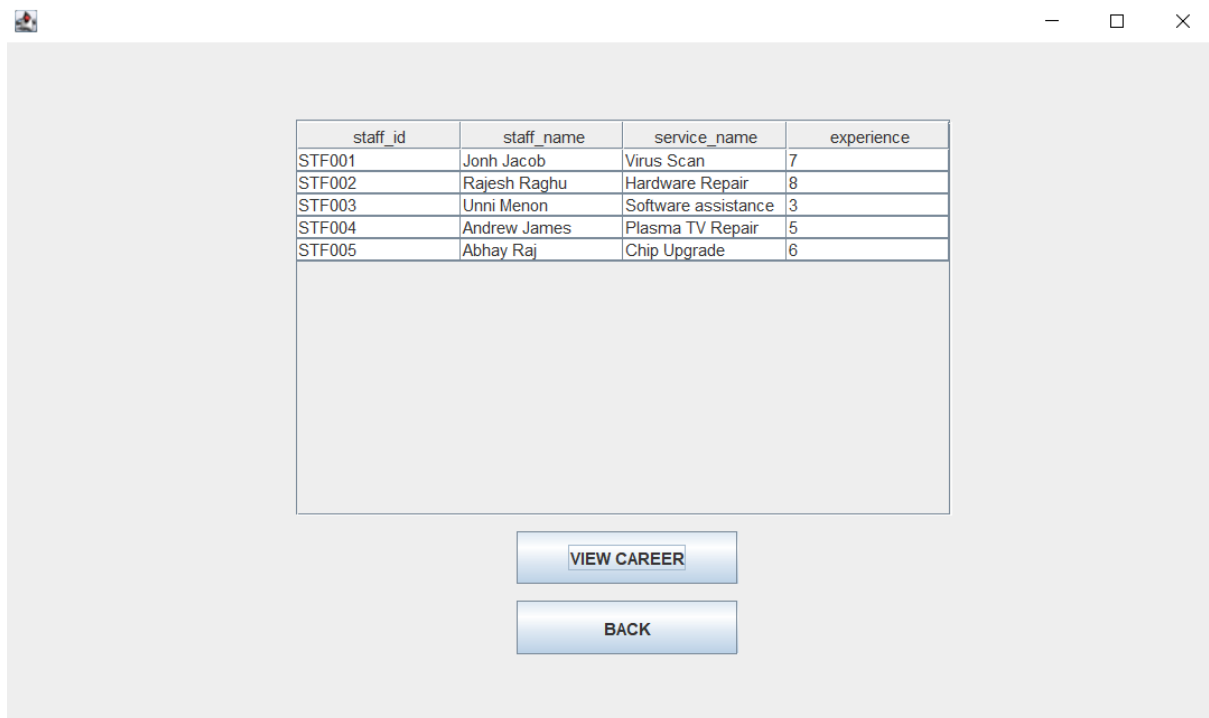
staff_id	staff_name	service_id	payment	service	phn_no
STF001	Jonh Jacob	SRV001	350	Virus Scan	9034782645
STF002	Rajesh Raghu	SRV002	700	Hardware Re...	9074625482
STF003	Unni Menon	SRV003	400	Software assi...	8094736284
STF004	Andrew James	SRV004	550	Plasma TV R...	7046245483
STF005	Abhay Raj	SRV005	630	Chip Upgrade	9849390389

GET DATA

BACK

Staff can view their official details.

View career details



The screenshot shows a window titled "View career details" with a table containing staff career information. The table has four columns: staff_id, staff_name, service_name, and experience. Below the table are two buttons: "VIEW CAREER" and "BACK".

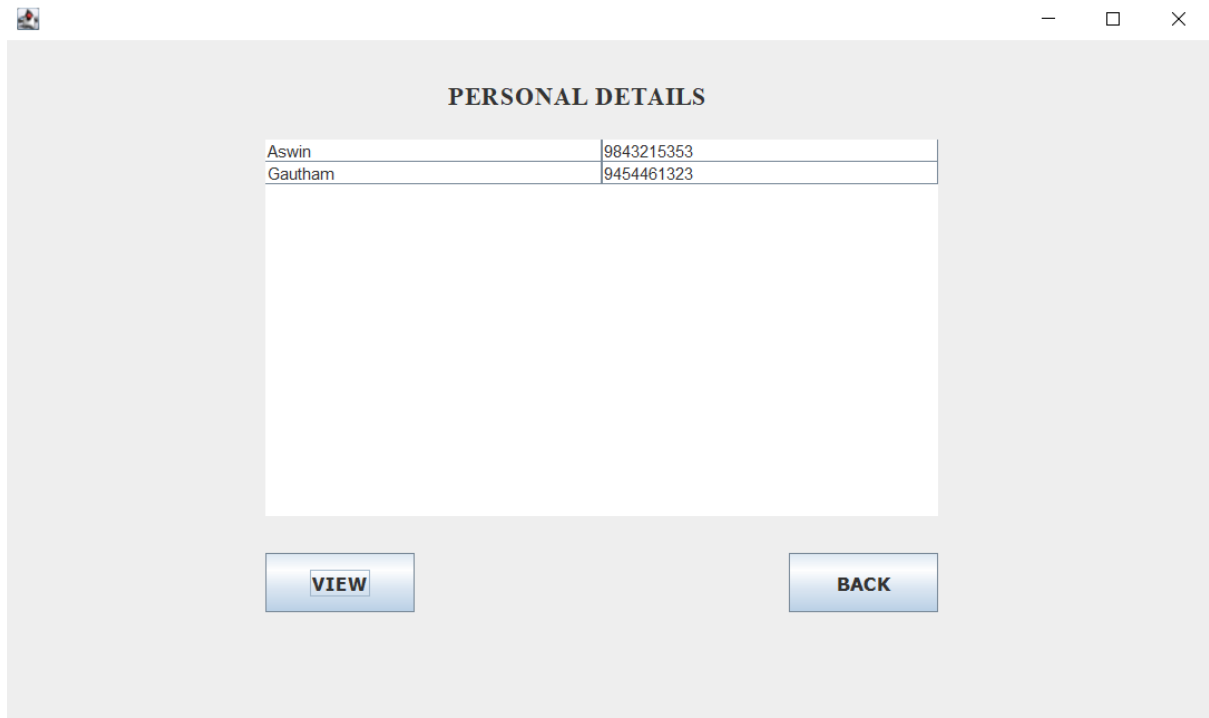
staff_id	staff_name	service_name	experience
STF001	Jonh Jacob	Virus Scan	7
STF002	Rajesh Raghu	Hardware Repair	8
STF003	Unni Menon	Software assistance	3
STF004	Andrew James	Plasma TV Repair	5
STF005	Abhay Raj	Chip Upgrade	6

VIEW CAREER

BACK

Staffs can view their career details.

View personal details



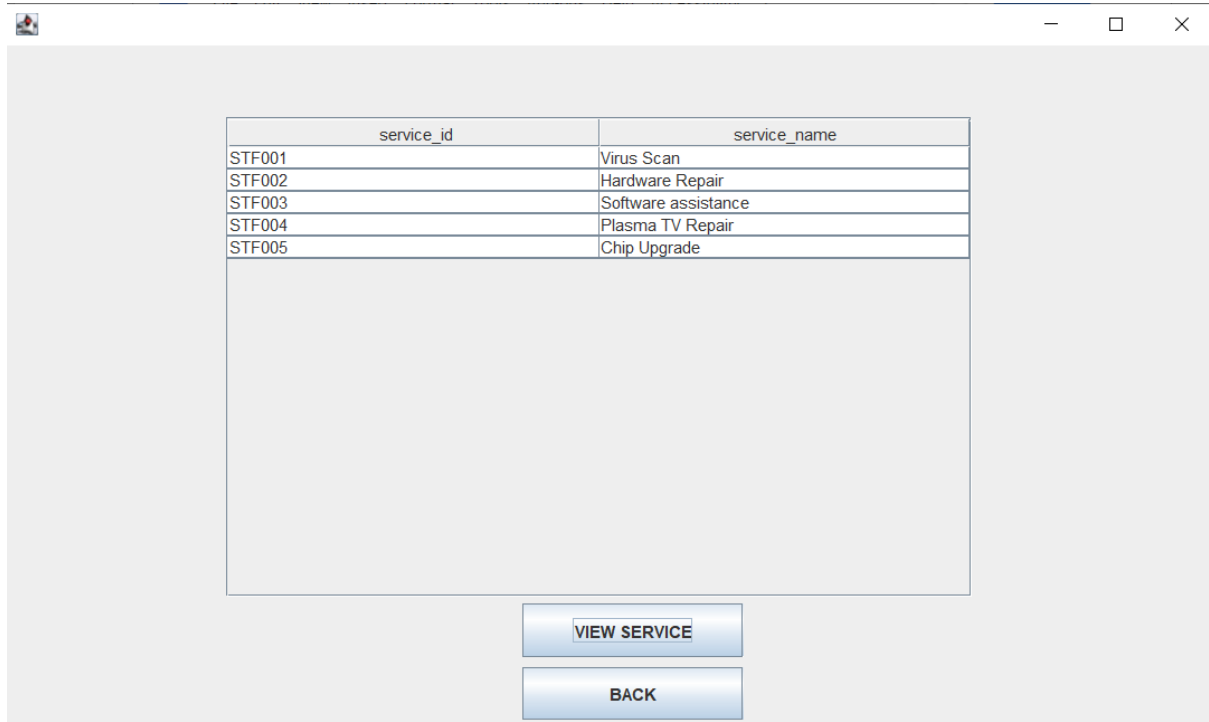
Aswin	9843215353
Gautham	9454461323

VIEW

BACK

Staffs can view their personal details.

View service



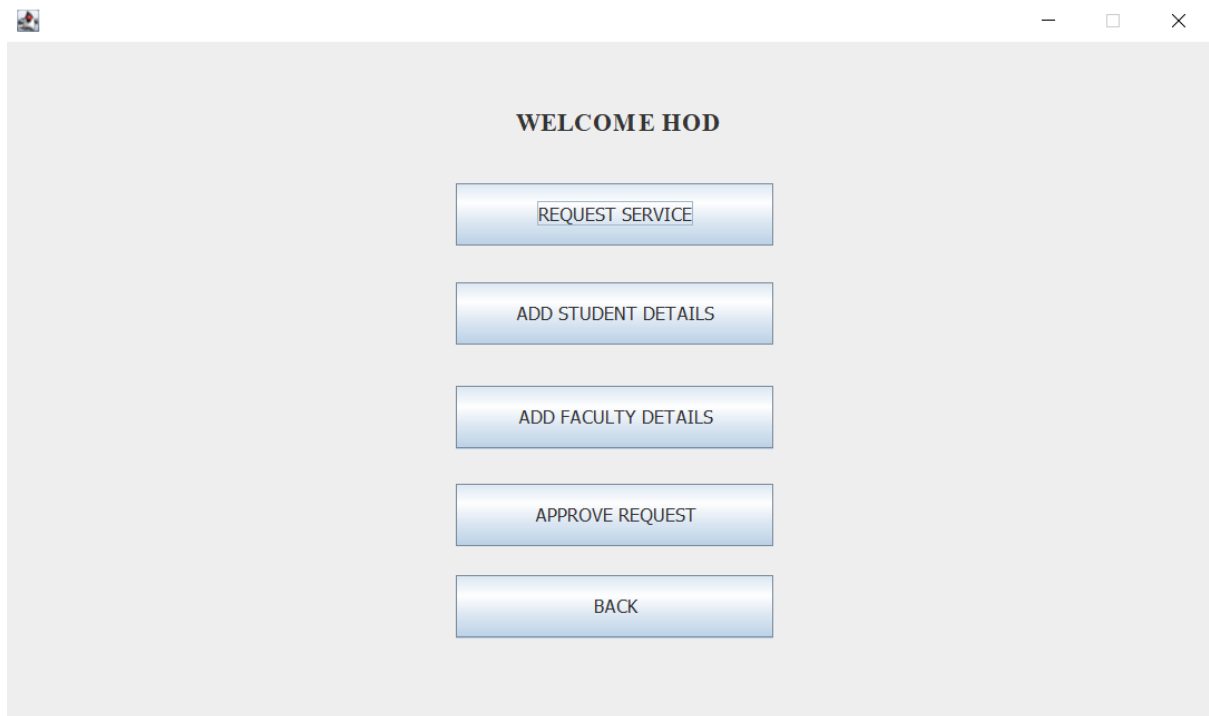
service_id	service_name
STF001	Virus Scan
STF002	Hardware Repair
STF003	Software assistance
STF004	Plasma TV Repair
STF005	Chip Upgrade

VIEW SERVICE

BACK

Staffs can view the staff id with their corresponding service name.

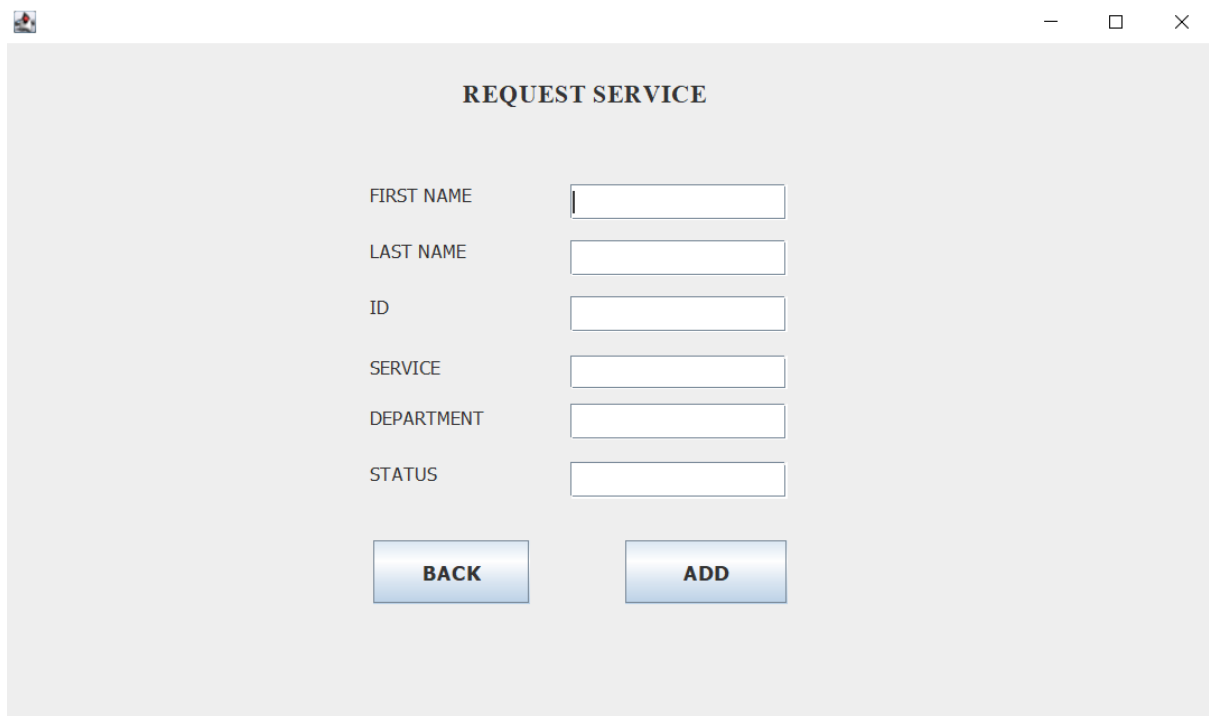
HOD and functions



A screenshot of a software window titled "HOD and functions". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a light gray background and is titled "WELCOME HOD" in bold, black, uppercase letters. Below the title, there are five blue buttons with white text, arranged vertically and centered. The buttons are labeled "REQUEST SERVICE", "ADD STUDENT DETAILS", "ADD FACULTY DETAILS", "APPROVE REQUEST", and "BACK".

These functionalities of HOD are to add students ,add service , request service and approve requests .

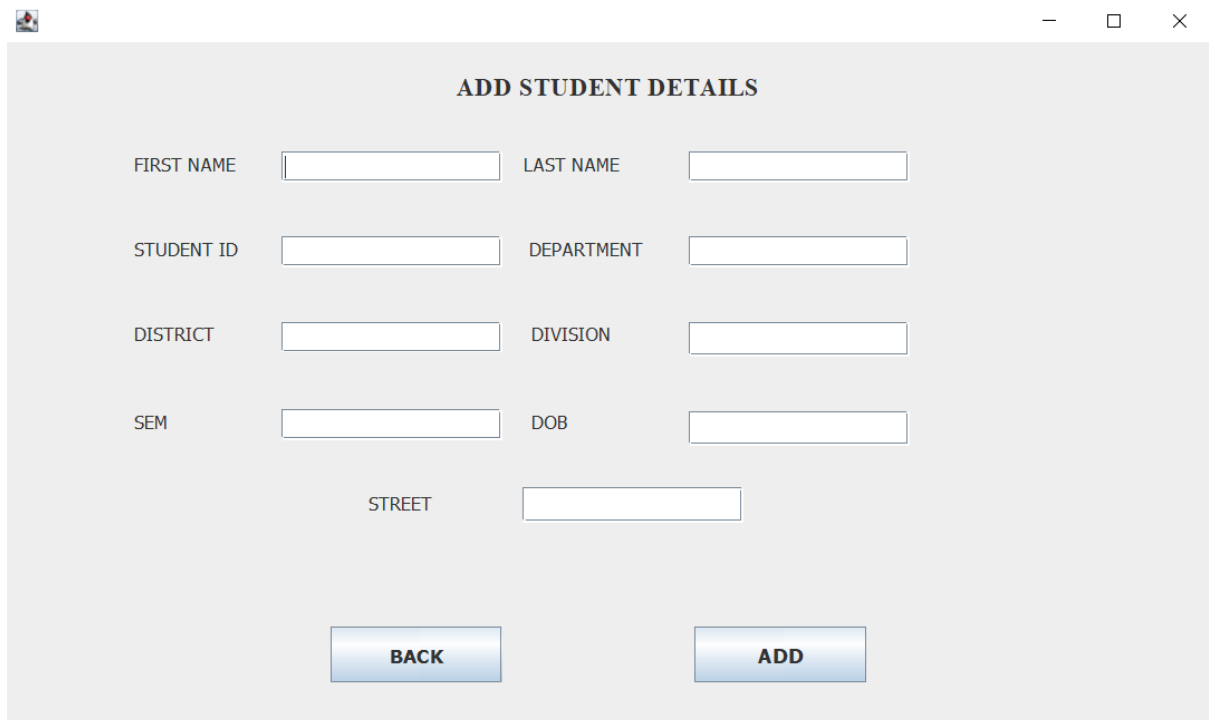
Request service



A screenshot of a software window titled "Request service". The window has a standard title bar with minimize, maximize, and close buttons. The main content area has a light gray background and is titled "REQUEST SERVICE" in bold, black, uppercase letters. Below the title, there are six text input fields arranged vertically, each with a label to its left: "FIRST NAME", "LAST NAME", "ID", "SERVICE", "DEPARTMENT", and "STATUS". At the bottom of the form, there are two blue buttons with white text: "BACK" and "ADD".

HOD can request for service and the details will be stored in the database.

Add staff



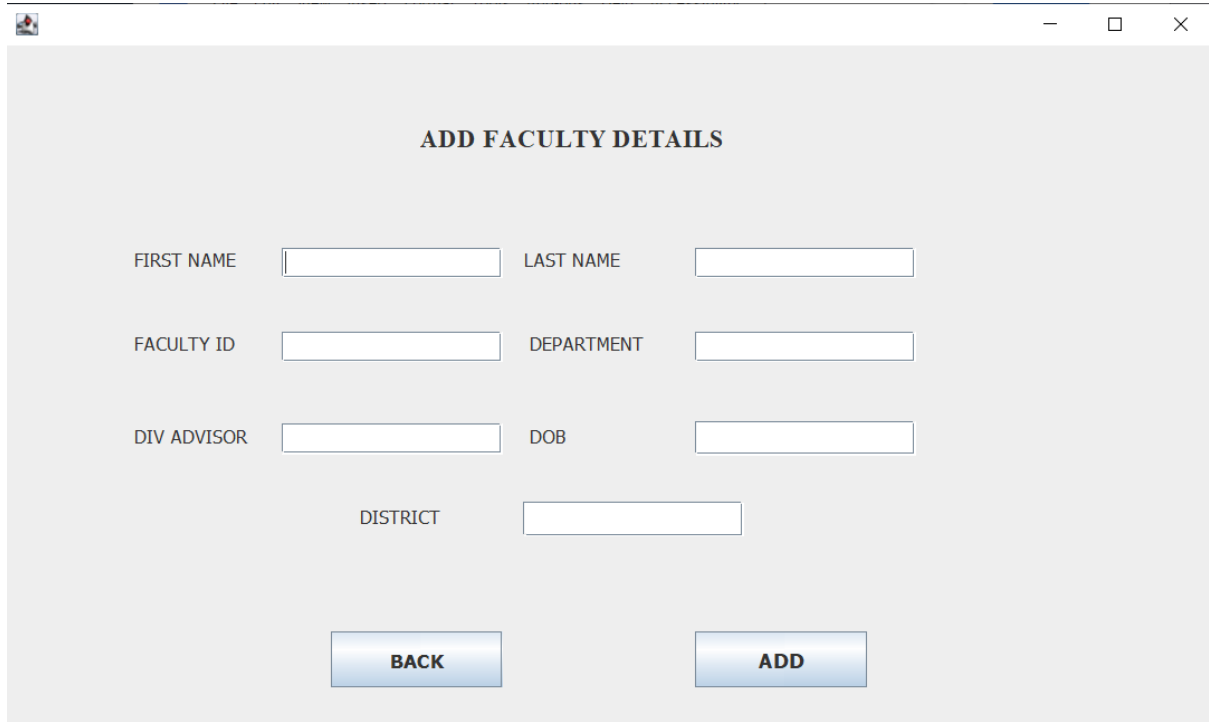
The screenshot shows a window titled "Add staff" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window is a form titled "ADD STUDENT DETAILS". The form contains the following fields:

- FIRST NAME:
- LAST NAME:
- STUDENT ID:
- DEPARTMENT:
- DISTRICT:
- DIVISION:
- SEM:
- DOB:
- STREET:

At the bottom of the form are two buttons: "BACK" and "ADD".

HOD can enter the details of students and the details will be stored in the database.

Add faculty



The screenshot shows a window titled "Add faculty" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window is a form titled "ADD FACULTY DETAILS". The form contains the following fields:

- FIRST NAME:
- LAST NAME:
- FACULTY ID:
- DEPARTMENT:
- DIV ADVISOR:
- DOB:
- DISTRICT:

At the bottom of the form are two buttons: "BACK" and "ADD".

HOD can enter the details of faculty and the details will be stored in the database.

Approving requests

Rajesh	S	reqapp001	Keyboard rep...	CSE	
Abhay	Raj	reqapp002	Monitor repair	MEC	
Karthik	Unni	reqapp003	Software upd...	MEC	
Deepak	Narwal	reqapp004	Virus scan	EEE	
Vishnu	Menon	reqapp005	Frozen syste...	ECE	

ID

STATUS

ACCEPT **VIEW** **BACK**

HOD can view requests and approve the request details will update in the database.

Student and functions

STUDENT

WELCOME STUDENT

REQUEST FOR APPROVAL

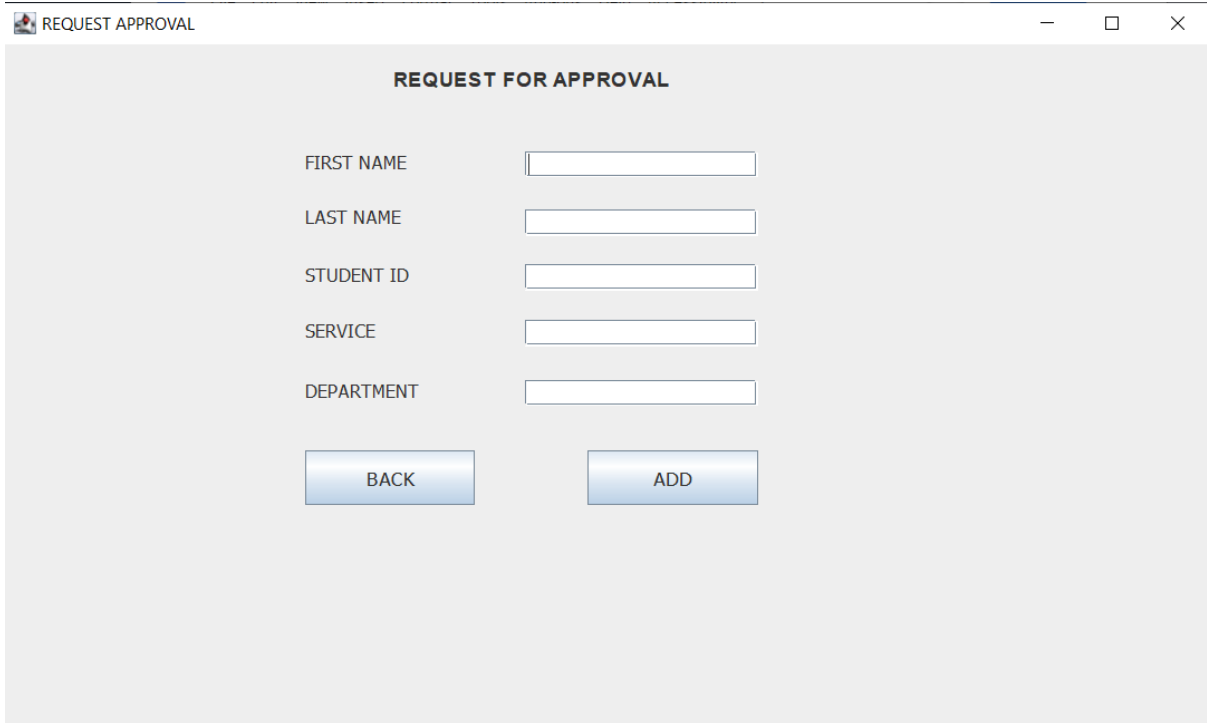
SEND REQUEST FOR SERVICE

MODIFY STUDENT DETAILS

BACK

The functionalities of a student is to send request for approval to the HOD, after receiving the approval, the student can send the request for service, also the student can edit, modify their details.

Request for approval



REQUEST APPROVAL

REQUEST FOR APPROVAL

FIRST NAME

LAST NAME

STUDENT ID

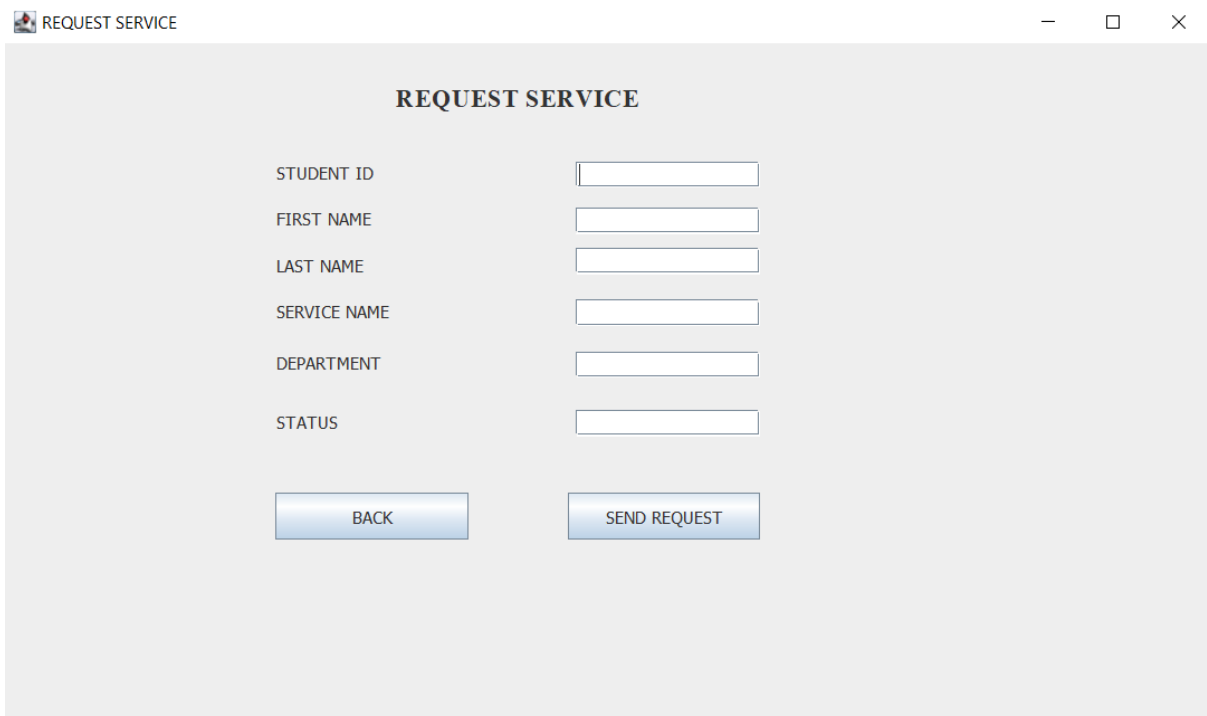
SERVICE

DEPARTMENT

BACK ADD

The students can send a request for approval to the HOD.

Request service



REQUEST SERVICE

REQUEST SERVICE

STUDENT ID

FIRST NAME

LAST NAME

SERVICE NAME

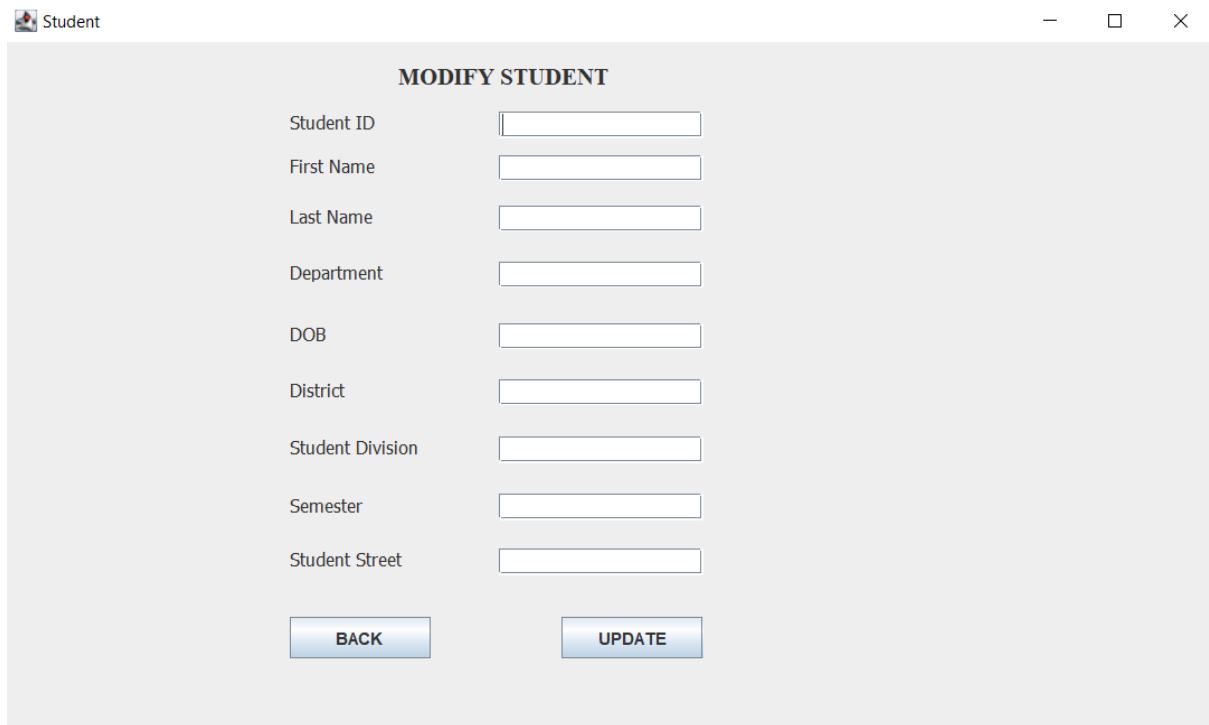
DEPARTMENT

STATUS

BACK SEND REQUEST

Students can request for service and the details will be stored in the database.

Modify details



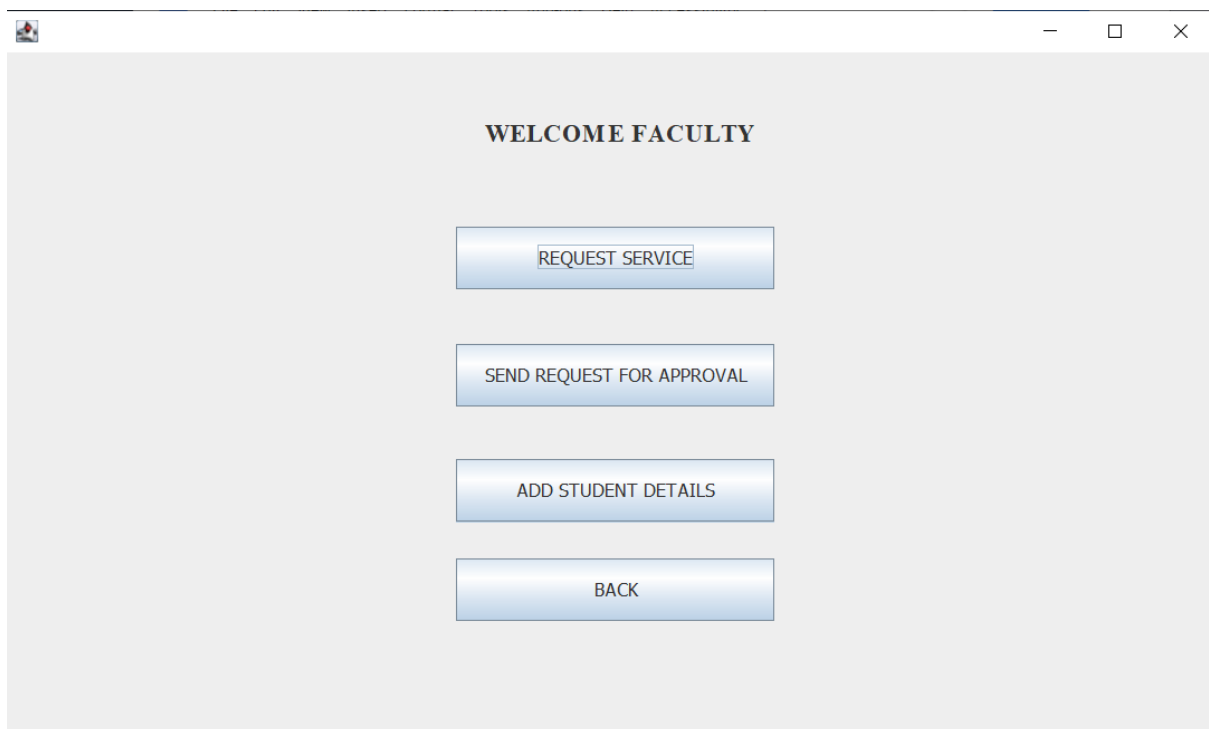
The screenshot shows a window titled "Student" with a standard Windows-style title bar (minimize, maximize, close buttons). The main content area is titled "MODIFY STUDENT" and contains a form with the following fields:

- Student ID
- First Name
- Last Name
- Department
- DOB
- District
- Student Division
- Semester
- Student Street

At the bottom of the form are two buttons: "BACK" and "UPDATE".

Students can edit, modify their details and the new details will be saved in the Database

Faculty and functions

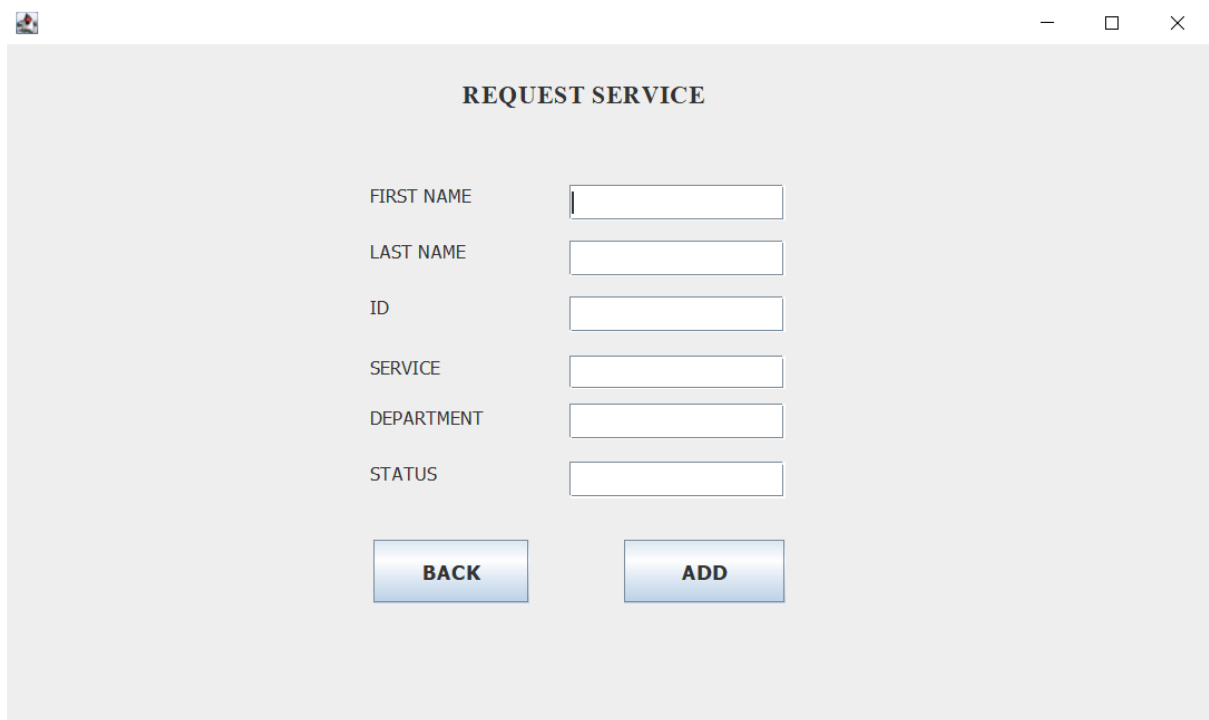


The screenshot shows a window titled "Faculty and functions" with a standard Windows-style title bar. The main content area is titled "WELCOME FACULTY" and contains four buttons arranged vertically:

- REQUEST SERVICE
- SEND REQUEST FOR APPROVAL
- ADD STUDENT DETAILS
- BACK

These functionalities of Faculties are to add students , request service and request for approval .

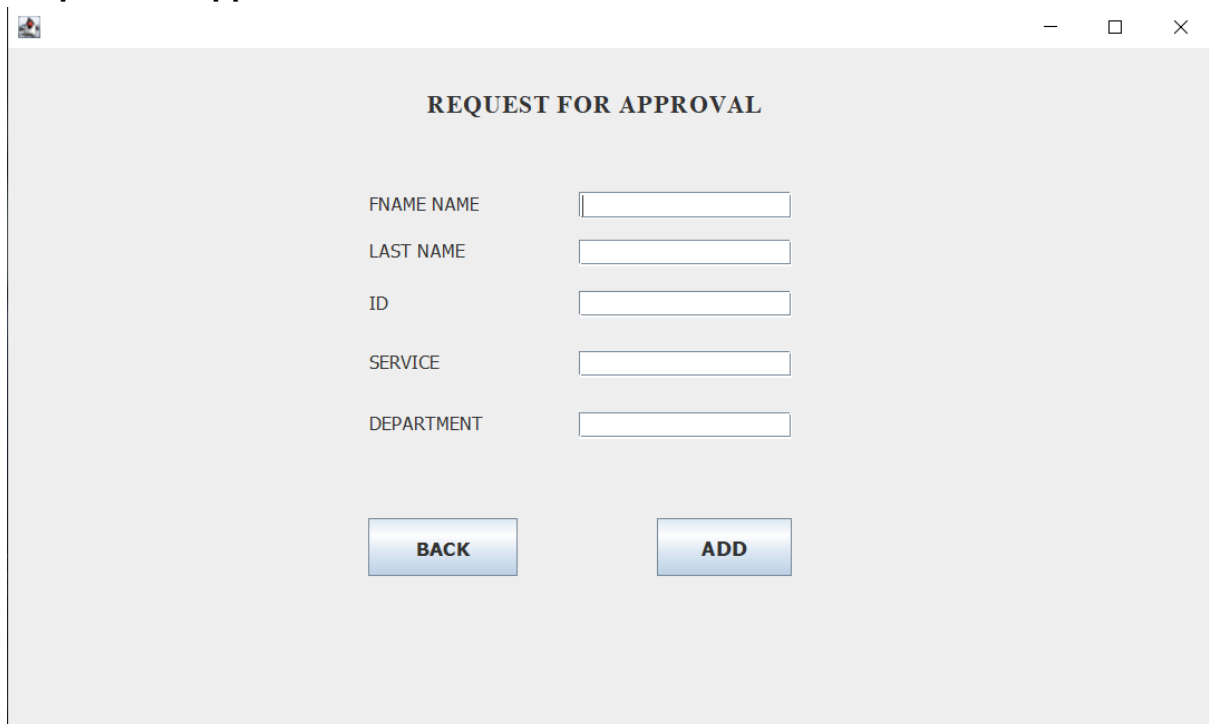
Request Service



A screenshot of a web application window titled "Request Service". The window has a standard title bar with a small icon on the left and minimize, maximize, and close buttons on the right. The main content area has a light gray background and is titled "REQUEST SERVICE" in bold, uppercase letters. Below the title, there are six input fields arranged vertically, each with a label to its left: "FIRST NAME", "LAST NAME", "ID", "SERVICE", "DEPARTMENT", and "STATUS". At the bottom of the form, there are two blue buttons with white text: "BACK" on the left and "ADD" on the right.

Faculty can request for service and the details will be stored in the database.

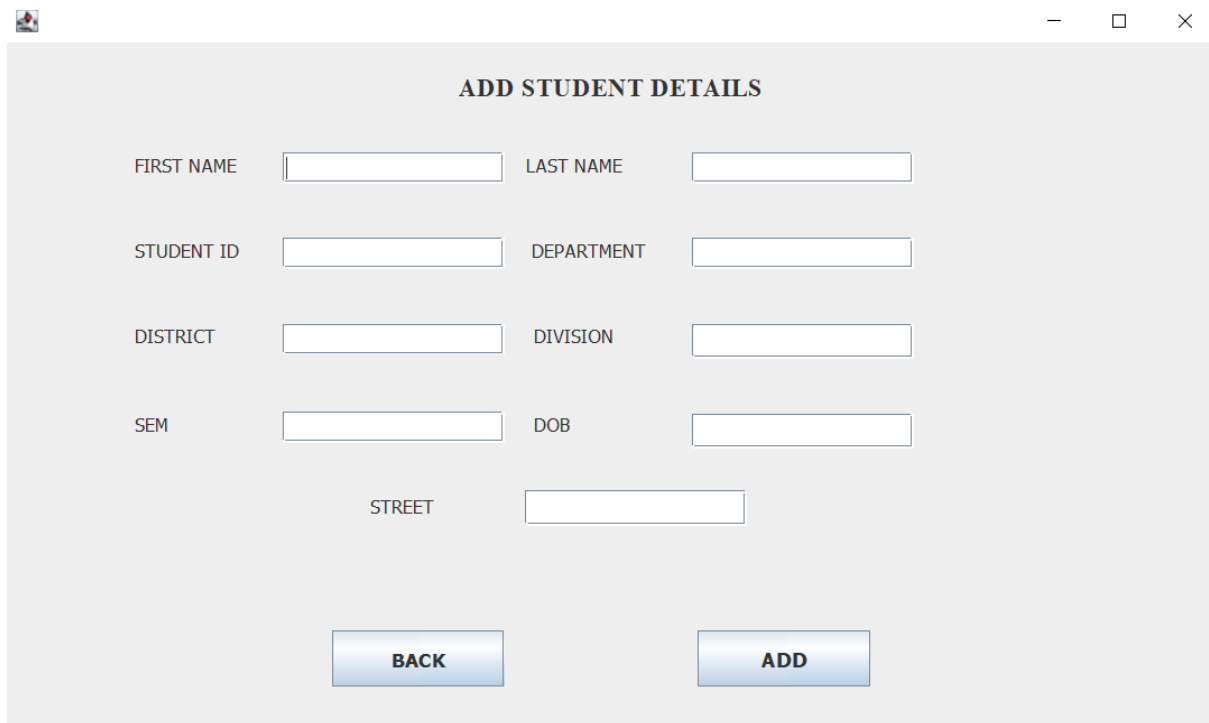
Request for approval



A screenshot of a web application window titled "Request for approval". The window has a standard title bar with a small icon on the left and minimize, maximize, and close buttons on the right. The main content area has a light gray background and is titled "REQUEST FOR APPROVAL" in bold, uppercase letters. Below the title, there are five input fields arranged vertically, each with a label to its left: "FNAME NAME", "LAST NAME", "ID", "SERVICE", and "DEPARTMENT". At the bottom of the form, there are two blue buttons with white text: "BACK" on the left and "ADD" on the right.

Faculty can request for approval from hod and the details will be stored in the database.

Add student



The screenshot shows a web application window titled "Add student". Inside the window, there is a form titled "ADD STUDENT DETAILS". The form contains the following fields:

- FIRST NAME
- LAST NAME
- STUDENT ID
- DEPARTMENT
- DISTRICT
- DIVISION
- SEM
- DOB
- STREET

At the bottom of the form, there are two buttons: "BACK" and "ADD".

Faculty can enter the details of students and the details will be stored in the database.

Group members:

ASWIN BABU K V	AM.EN.U4CSE20213
GOUTHAM RAJESH	AM.EN.U4CSE20231
PARTHASARADHI H	AM.EN.U4CSE20253
PRANAV VINOD	AM.EN.U4CSE20256