All Alalamein

Software Engineering

Course Code: CSE251

Faculty of Computer

Science & Engineering

Petroleum Company System

Project Description:

Aim: To increase the efficiency of operation in the company

This system will be used for time scheduling and task distribution and operation management.

This system will not be fully involved in the production process.

List of team members:

Pro	ject Manager:	Ali Ehab Ali Hassan	21100800

Team Members:

Mohamed Ashraf Rabie Mohamed	21100854
Ramez Mohamed Fathi Ahmed	21100793
Youssef Khaled Abdelsalam Mohamed	21100865
Mohamed Ashraf Mahmoud Mohamed	21100873

Initial identified customer requirements:

- 1 Managing insurance
- 2 Managing tool requests by Eng
- 3 Managing shift distribution
- 4 Displaying The salaries of all employees
- 5 Managing The salaries of all employees
- 6 Managing Employee requests
- 7 Managing Task Distribution
- 8 Determining workplace of employees
- 9 Managing hiring requests
- 10- Managing maintenance request
- 11- Displaying Shift Time
- 12- Displaying Shift Location
- 13- Classification of produced waste
- 14- Displaying the amount of waste produced
- 15- Managing wastes recycling
- 16- Managing lab requests
- 17- Displaying lab reports
- 18- Managing employee promotions
- 19- Managing employee transportation
- 20- Managing work teams
- 21- Comparing production with prediction
- 22- Displaying legal issues to the lawyers
- 23- Applying legal actions
- 24- Displaying The company's financial position
- 25- Displaying maintenance report
- 26- Accessing of cameras
- 27- Monitoring Work entry and departure times for employees
- 28- User login

Initial identified subsystems names and functions:

A) Security System:

- Monitoring the camera system
- Monitoring Work entry and departure times for employees

B) Login System:

- Shows the user the correct interface based on his profession and position
- C) Maintenance System:
- Monitoring the repairs of machines and tools
- Showing the locations of machine that are defective
- Showing the defective machines and their defects

D) Transporting System:

- Managing the employee transport by managing the pickup times
- Managing the transport of products

E) Financial System:

- Managing the employee salaries and bonuses
- Showing the financial state of the company
- Displaying the required bills
- Showing the Value of the company stocks in the stock market
- Approving and declining the requests regarding purchasing
- Calculating the profit and losses of the company
- Displaying The salaries of all employees
- Comparing production with prediction

F) HR System:

- Managing employee promotions
- Managing hiring and firing employees
- Managing work teams
- receiving employee report cards from HR workers

G) Lab System:

- Receive lab reports from lab members
- Displaying lab reports

H) Insurance System:

- Managing insurance by receiving the bills submitted by the employees and showing them to the accountants for review
- Monitoring the wellbeing of the employees
- Follow-up standards of peace and honesty

I) Waste recycle System:

- Managing wastes recycling
- Displaying the amount of waste produced
- Classification of produced waste

- J) Legal affairs System:
- Displaying legal issues to the lawyers
- Applying legal actions

K) Requests:

- Managing Employee requests
- Managing hiring requests
- Managing lab requests
- Managing tool requests by Eng
- Managing maintenance requests

L) Scheduling system:

- Managing shift distribution
- Managing shift duration
- Managing shift location
- Managing Task Distribution
- Display Employee schedule
- Enables higher-ups to Edit task of lower ranked employees that are under them

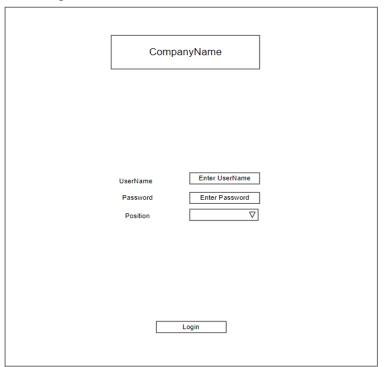
Traceability Matrix

	Α	В	С	D	E	F	G	Н	1	J	K	L
1					Т			Т				
2					Т						Т	
3						Т						Т
4					Т							
5					Т	Т						
6											Т	
7						Т						Т
8						Т						Т
9						Т					Т	Т
10			Т		Т						Т	Т
11												Т
12												Т
13					Т				Т			
14									Т			
15									Т			
16					Т		Т				Т	
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18					Т	Т						Т
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22										Т		
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26	Т											
27	Т				Т	Т						Т
28		Т										

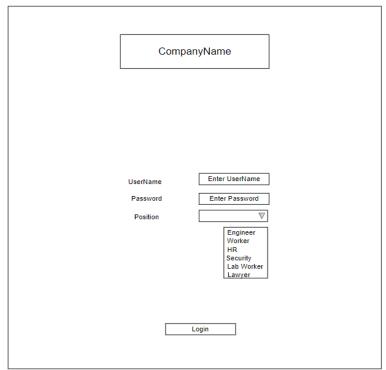
	Subsystem Name	Subsystem Function	Subsystem Interface
A	Security System	Monitoring the camera system Monitoring Work entry and departure times for employees.	- public void view_camera(int camera_number) - public void count_enter(int employee_id) - public void count_exit(int employee_id)
В	Login System	- Shows the user the correct interface based on his profession and position	- public boolean login(String username, String password) - public Account newAccounte(String username, string password, String occupation, String position)
С	Maintenance System	- Monitoring the repairs of machines and tools - Showing the locations of machine that are defective - Showing the defective machines and their defects	- public void monitor_repairs(Report report) - public String show_all_locations_of_defects() - public string show_lication_of_defect(Report report) - public void show_all_defects() - public void show_all_defects() - public string show_defect(Report report)
D	Transporting System	- Managing the employee transport by managing the pickup times - Managing the transport of products	- public void set_employee_pickup_time(Employee employee) - public void set_employee_pickup_location(Employee employee) - public void show_employee_transportation_info (Employee employee) - public int set_product_transpotation_details(Report report) - public Report transportation_details(Int transportation_id) - public void transport_start_confirmation(int transport_id, Boolean confirmation) - public void transport_end_confirmation(int transport_id, Boolean confirmation)
Е	Financial System	- Managing the employee salaries and bonuses - Showing the financial state of the company - Displaying the required bills - Showing the Value of the company stocks in the stock market - Approving and declining the requests regarding purchasing - Calculating the profit and losses of the company - Displaying The salaries of all employees - Comparing production with prediction	- public void set_employee_salary(int employee id, double new_salary) - public void set_employee_bonus(int employee_id, double bonous) - public int add_due_bill(Bill bill) - public void display_all_due_bill(s) - public void display_due_bill(int bill_id) - public void due_bill action(int bill_id, boolean verdict) - public int add_total_expese(Bill final_recipt) - public void display_dexpense(int bill_id) - public void calculate_profit() - public void calculate_profit() - public void calculate_loss() - public void display_employee_salaries()
F	HR System	- Managing employee promotions - Managing hiring and firing employees - Managing work teams - Monitoring Work entry and departure times for employees - receiving employee report cards from HR workers	- public void set_employee_position(int id, String new_position) - public void fire_employe(int id, String reason_for_firing) - public int add_work_team(String team_name, String team_task, Department department) - public void add_employee_to_team(int team_id, int employee_id) - public void remove_employee_from_team(int team_id, int employee_id) - public void delete_team(int team_id) - public int add_employee_report_card(Report report, int employee_id) - public void delete_employee_report_card(int report_id, int employee_id)
G	Lab System	- Receive lab reports from lab members - Displaying lab reports	- public int submit_lab_report(Report report) - public void display_lab_report(int report_id)
Н	Insurance System	- Managing insurance by receiving the bills submitted by the employees and showing them to the accountants for review - Monitoring the wellbeing of the employees - Follow-up standards of peace and honesty	- public int add_bill(int id, Report report) - public void view_bill(int bill_id) - public void bill_action(int billid) - public void bill_action(int billid) - public void display_review(int review_id) - public void display_review(int review_id) - public void display_ll_reviews() - public void delet_review(int review_id)
1	Waste recycle System	Managing wastes recycling Displaying the amount of waste produced Classification of produced waste	- public int submit_recycling_repoet(Report report) - public void display_recycling_report(int report_id) - public void write_report_to_the_system(int report_id) - public void calculate_waste_produced() - public void display_waste_classification()
J	Legal affairs System	- Displaying legal issues to the lawyers - Applying legal actions	- public int submit_legal_paper(Report report) - public void display_legal_paper(int paper_id) - public void legal_action(int paper_id, boolean action)
K	Requests	- Managing Employee requests - Managing hiring requests - Managing lab requests - Managing tool requests by Eng - Managing maintenance requests	- public int add_employee_request(Request request) - public void display_employee_request(int employee_request_id) - public int add_lab_request(Request request) - public void display_lab_request(It lab_request_id) - public int add_Eng_tool_request(Request request) - public int add_Eng_tool_request(Request request) - public int add_maintenance_request(Request request_id) - public int add_maintenance_request(Request request) - public void display_maintenance_request(int maintenance_request_id)
L	Scheduling system	- Managing shift distribution - Managing shift duration - Managing shift location - Managing Task Distribution - Display Employee schedule - Enables higher-ups to Edit task of lower ranked employees that are under them	- public int set_shift(int id, String shift_details) - public void set_shift_duration(int id, String start_time, String end_time) - public void set_shift_location(int id, String shift_location) - public int add_task(int id, String dask_details) - public void edit_task(int id, int task_id, String new_details) - public void delete_task(int id, int task_id) - public void display_schedule(int id)

Initial expected user graphical interface(GUI)

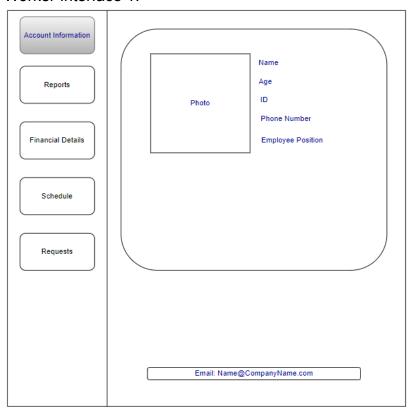
User Login Interface 1:



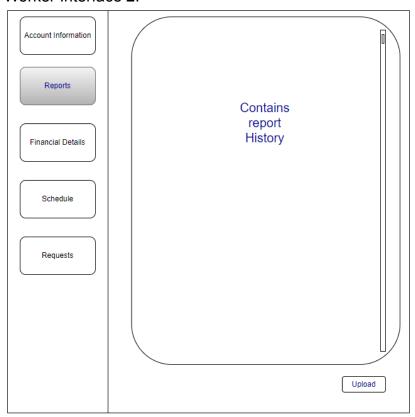
User Login Interface 2:



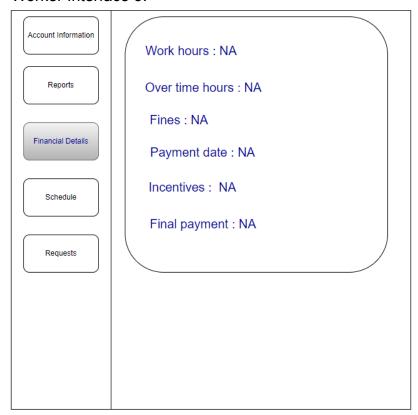
Worker Interface 1:



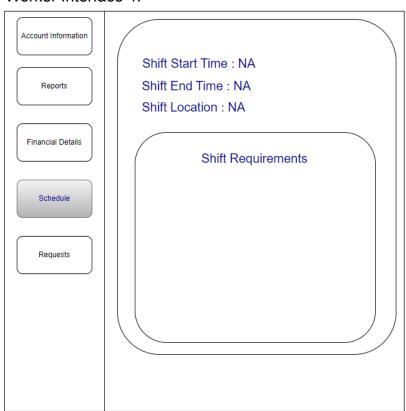
Worker Interface 2:



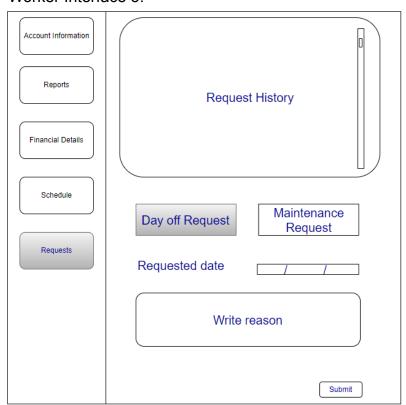
Worker Interface 3:



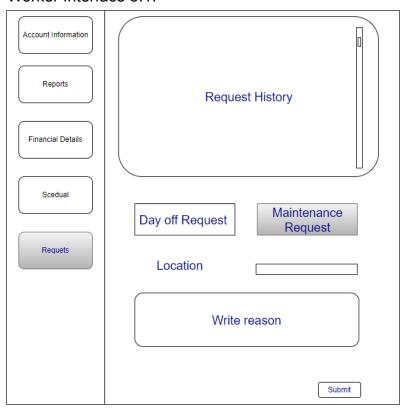
Worker Interface 4:



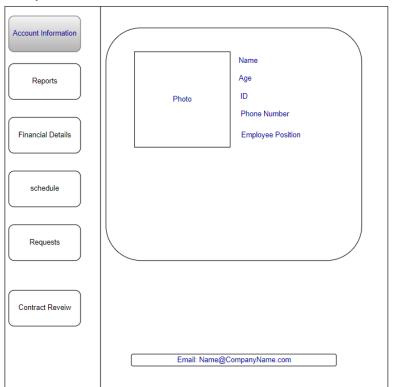
Worker Interface 5:



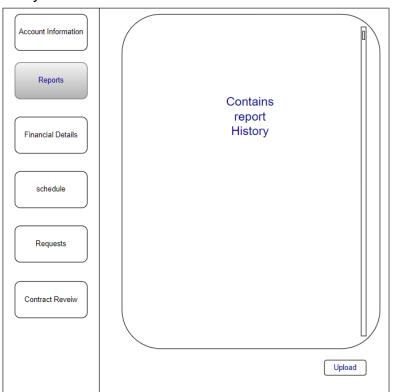
Worker Interface 5.1:



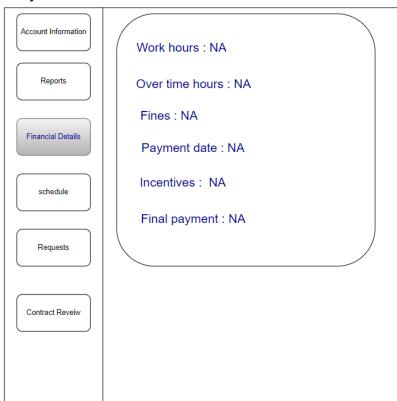
Lawyer Interface 1:



Lawyer Interface 2:



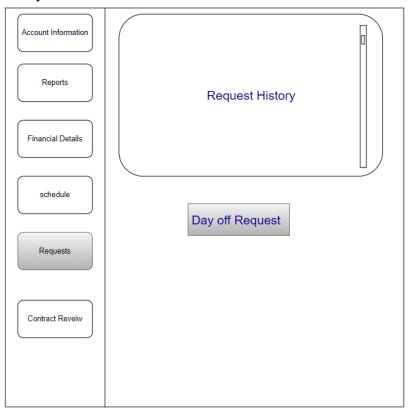
Lawyer Interface 3:



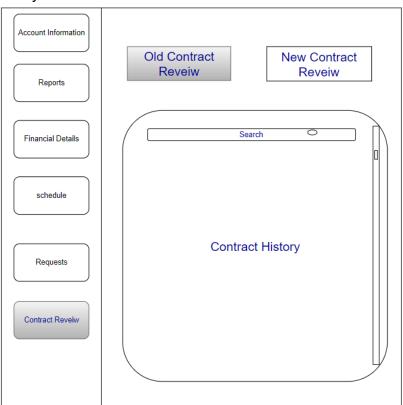
Lawyer Interface 4:



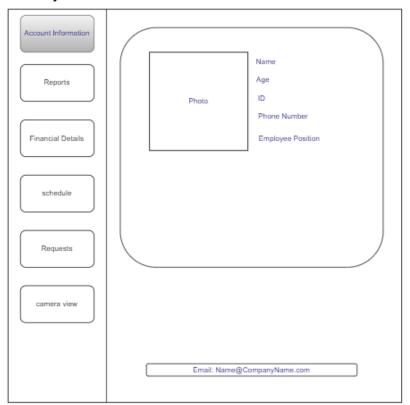
Lawyer Interface 5:



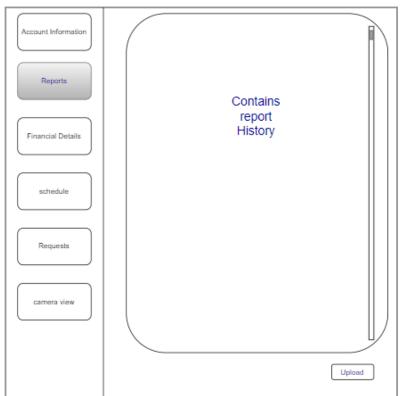
Lawyer Interface 6:



Security Interface 1:



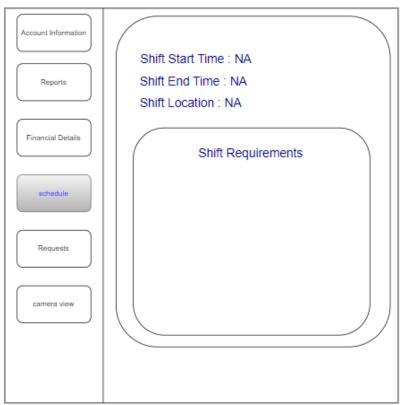
Security Interface 2:



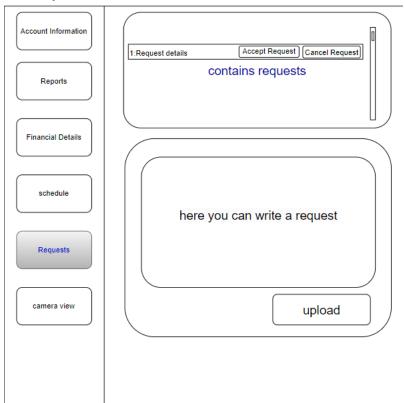
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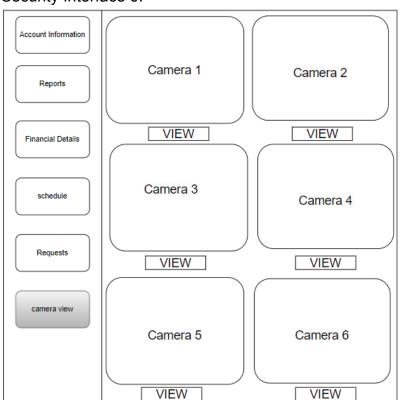
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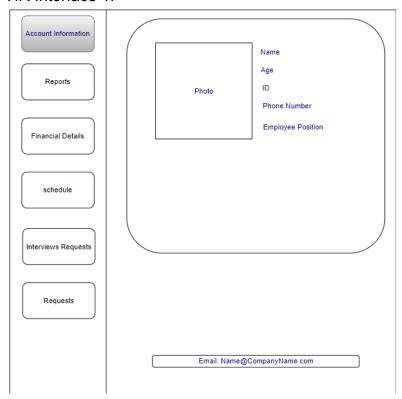
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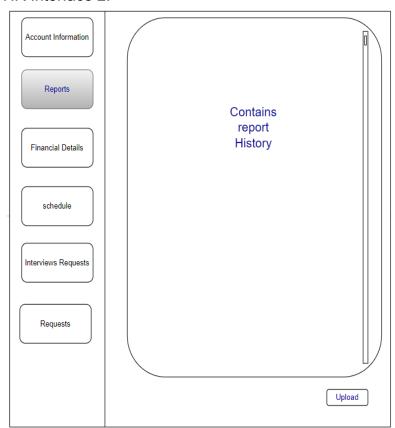
Security Interface 6:



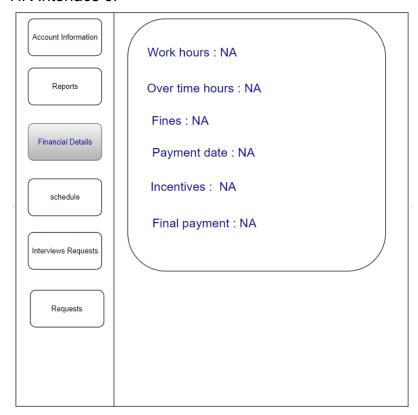
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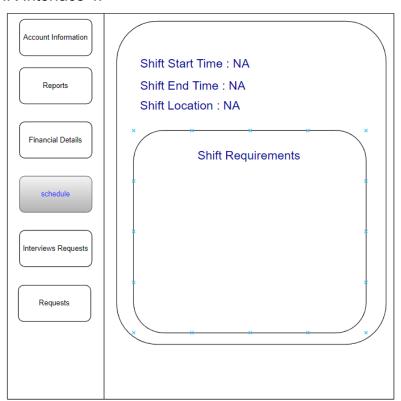
HR Interface 2:



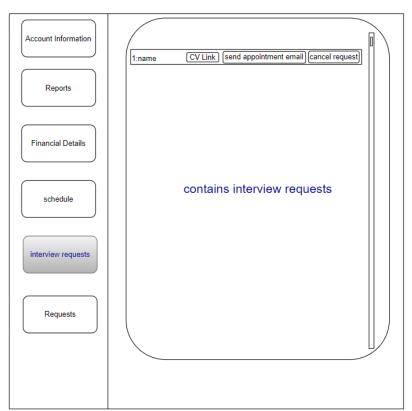
HR Interface 3:



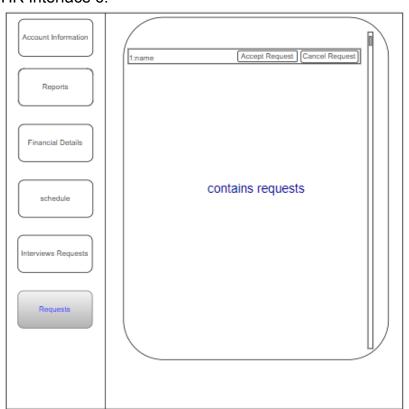
HR Interface 4:



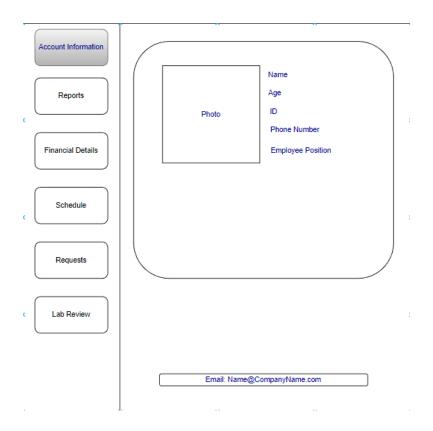
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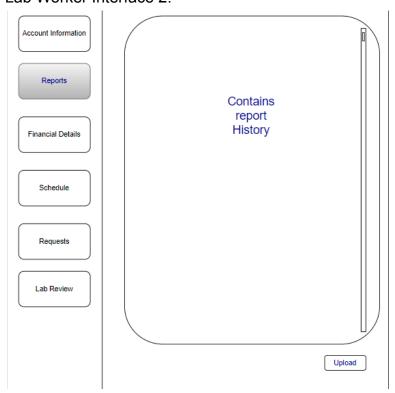
HR Interface 6:



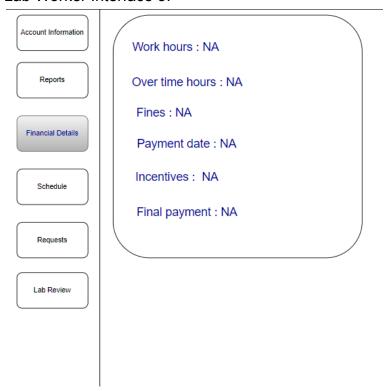
Lab Worker Interface 1:



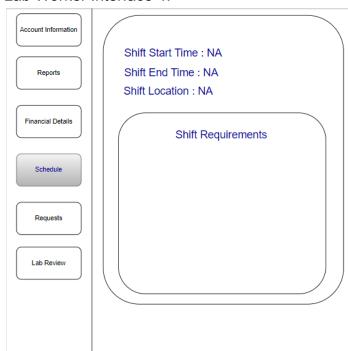
Lab Worker Interface 2:



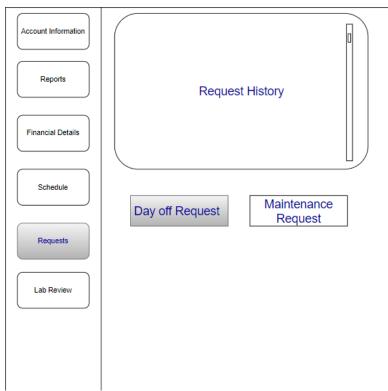
Lab Worker Interface 3:



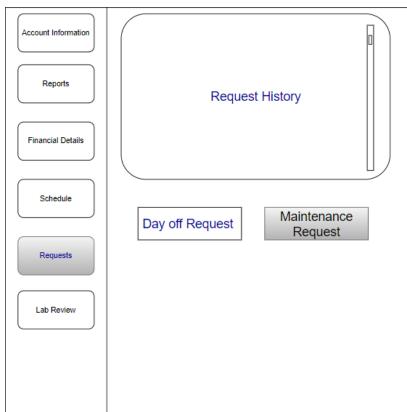
Lab Worker Interface 4:



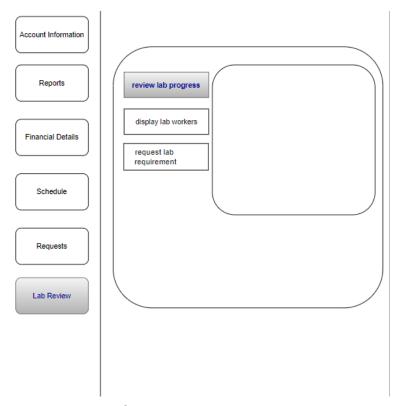
Lab Worker Interface 5:



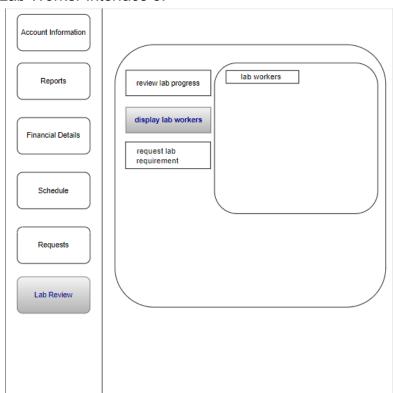
Lab Worker Interface 6:



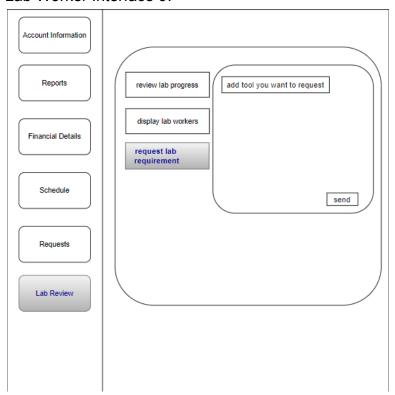
Lab Worker Interface 7:



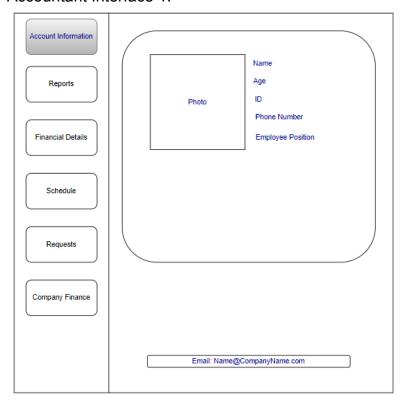
Lab Worker Interface 8:



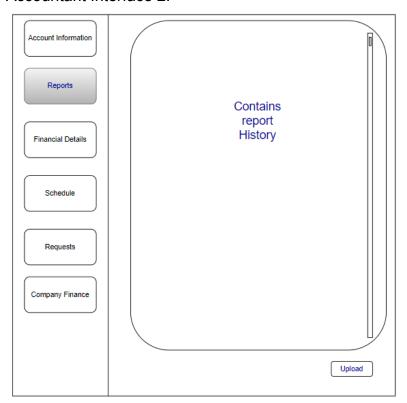
Lab Worker Interface 9:



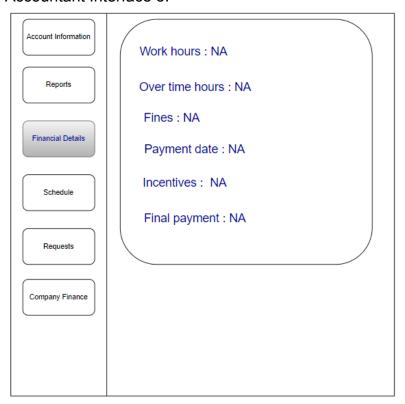
Accountant Interface 1:



Accountant Interface 2:



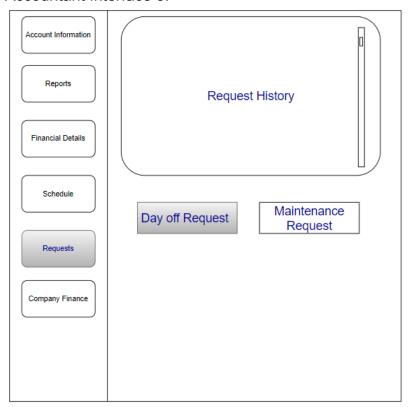
Accountant Interface 3:



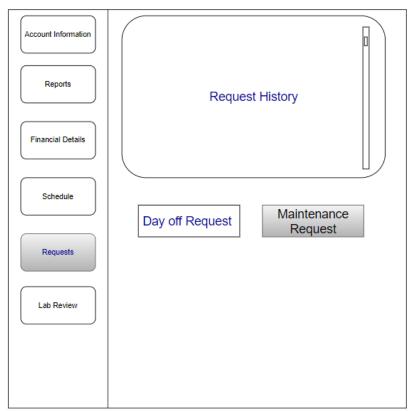
Accountant Interface 4:



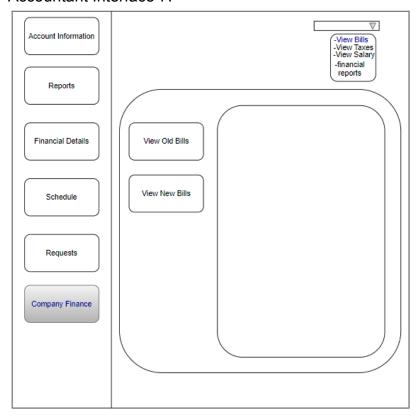
Accountant Interface 5:



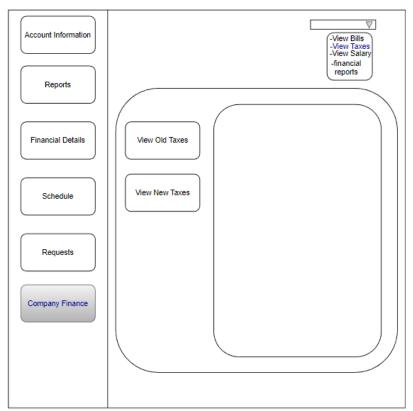
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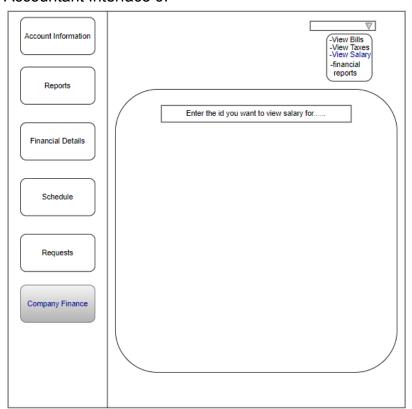
Accountant Interface 7:



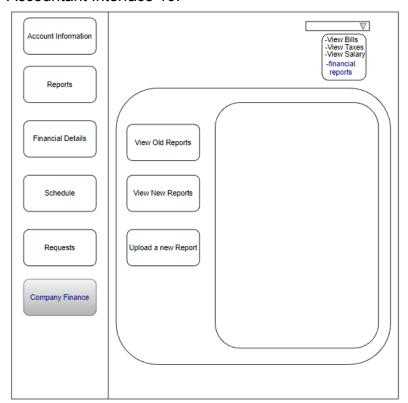
Accountant Interface 8:



Accountant Interface 9:



Accountant Interface 10:



System User Manual

On entering the system the user will be prompted to the login interface .

On entering the username and password and choosing the correct profession the user will be prompted an interface depending on his profession.

1.Worker:

If the user logs in as a worker he will be pushed to a screen containing his account information on the left side of the screen, there will be multiple options.

In the case of the worker (Account information(default), report, financial details, schedule, requests).

If the user clicks on any of the options he will be pushed to a different screen.

In the case of the user choosing the reports option, the user will be pushed to a screen containing all the previous reports submitted by you or the other workers and a button on the bottom right corner giving you an option of uploading your Report.

In case of choosing the financial details option, the user will be pushed into a screen containing all the details about his salary.

In case the user chooses the schedule he will be pushed into a screen containing his shift time and location and requirements.

In case the user chooses the requests option he will be pushed to a screen containing the request history and 2 buttons (day off request(pushed by default) and maintenance request).

In case the user does not click either button he will be on the day-off request screen by default being prompted to enter the day and the reason for the request.

If the user decides to click on the maintenance request button he will be pushed to a screen where he will be prompted to enter the location of the malfunction and the reason for the malfunction if known.

2.Lawyer:

if the user logs in as a lawyer he will be pushed to a screen containing his account information on the left side of the screen, there will be multiple options.

In the case of the lawyer (Account information(default), report, financial details, schedule, requests, contract review)

if the user clicks on any of the options he will be pushed to a different screen.

In the case of the user choosing the reports option, the user will be pushed to a screen containing all the previous reports submitted by you or the other workers and a button on the bottom right corner giving you an option of uploading your report.

In case of choosing the financial details option, the user will be pushed into a screen containing all the details about his salary In case the user chooses the schedule he will be pushed into a screen containing his shift time and location and requirements.

In case the user chooses the requests option he will be pushed into a screen containing the request history and a button(day off request) if pressed pushes the user into a screen prompting him to enter a date and reason for the request.

In case of choosing the contract review option, the user will be pushed to a screen containing 2 buttons(old contracts(default) and new contracts) if the user chooses not to click any of the buttons the old contract button will be pushed by default showing a list of the old contracts that have been approved or declined.

In the case of the user clicking the new contract button, he will be pushed to a screen where the user will have a list of all the new contracts and an option of approving or disapproving them.

3.HR:

If the user logs in as an HR worker he will be pushed to a screen containing his account information on the left side of the screen, there will be multiple options.

In the case of HR workers (Account information(default), report, financial details, schedule, interview requests, requests)

If the user clicks on any of the options he will be pushed to a different screen.

In the case of the user choosing the reports option, the user will be pushed to a screen containing all the previous reports submitted by you or the other workers and a button on the bottom right corner giving you an option of uploading your Report.

In case of choosing the financial details option, the user will be pushed into a screen containing all the details about his salary.

In case the user chooses the schedule he will be pushed into a screen containing his shift time and location and requirements.

In case of the user choosing the interview requests option he will be pushed to a screen containing a list of names of the people requesting an interview with their CV links and a send an appointment email button and cancel request button.

In case of the user choosing the request option, he will be pushed to a screen with a list containing the ids and corresponding requests and an accept request and cancel request button.

4. Security:

If the user logs in as security he will be pushed to a screen containing his account information on the left side of the screen, there will be multiple options.

In the case of security workers (Account information(default), report, financial details, schedule, requests, camera view).

If the user clicks on any of the options he will be pushed to a different screen.

In the case of the user choosing the reports option, the user will be pushed to a screen containing all the previous reports submitted by you or the other workers and a button on the bottom right corner giving you an option of uploading your Report.

In case of choosing the financial details option, the user will be pushed into a screen containing all the details about his salary.

In case the user chooses the schedule he will be pushed into a screen containing his shift time and location and requirements.

In case of the user choosing the request option, he will be pushed to a screen with a list containing the ids and corresponding requests and an accept request and cancel request button and a button where if the user chooses to press he will be prompted to enter a request.

4.Accountant:

If the user logs in as an accountant he will be pushed to a screen containing his account information on the left side of the screen, there will be multiple options.

In the case of the accountant (Account information(default), report, financial details, schedule, requests, company Finance).

If the user clicks on any of the options he will be pushed to a different screen.

In the case of the user choosing the reports option, the user will be pushed to a screen containing all the previous reports submitted by you or the other workers and a button on the bottom right corner giving you an option of uploading your Report.

In case of choosing the financial details option, the user will be pushed into a screen containing all the details about his salary.

In case the user chooses the schedule he will be pushed into a screen containing his shift time and location and requirements.

In case the user chooses the requests option he will be pushed to a screen containing the request history and 2 buttons (day off request(pushed by default) and maintenance request).

In case the user does not click either button he will be on the day-off request screen by default being prompted to enter the day and the reason for the request.

If the user decides to click on the maintenance request button he will be pushed to a screen where he will be prompted to enter the location of the malfunction and the reason for the malfunction if known

In case the user chooses the company finance option he will be pushed to a screen containing a dropdown box containing (view bills, view taxes, view salary, financial report).

If the user clicks on the view bills option two buttons will appear (new bill, old bills) if the user chooses to click on the old bill button a list of the old bills will be displayed and in the case of the new bill option, a list of the new bills will be displayed.

In case the user chooses to click the view taxes option two buttons will appear (new taxes, old taxes) if the user chooses to click on the old taxes button a list of the old taxes will be displayed and in the case of the new taxes option, a list of the new taxes will be displayed.

In case the user chooses the view salary option he will be prompted to enter the id of the employee whom he wants to see the salary of.

In case the user chooses the financial report option 3 buttons will appear (view old reports, view new reports, upload a new report).

If the user chooses the view old report option a list of old reports will be displayed.

If the user chooses the view new report option a list of new reports will be displayed.

If the user chooses the upload new report option he will be prompted to enter a new report.