

HOSPITAL APPOINTMENT INTERFACE

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Introduction

The Hospital Appointment Interface is a simple command-line project designed to manage and regulate the mechanism of booking a hospital appointment, viewing the available tests, and choosing time slots. The system provides very basic record-keeping for the patient details and reduces the manual workload in handling appointments.

Objectives

- Automate appointment scheduling to reduce wait times and administrative effort.
- Clearly and interactively present patients with check-up choices.
- Keep a computerized record of the patient's basic information for each arranged visit.

Designing the System and Architecture

The system applies modular design and is divided into three key Python scripts:

Module	Responsibility
hospital_appointment.py	Handles user interaction, patient data, main logic
check_up_price.py	Lists test types and their prices
time_slot.py	Manages available booking dates and time slots

Data Flow

- Patient enters the details, selects a check-up, gets the price, and confirms a booking slot.
- Patient details are saved in a `details.txt` file, simulating hospital record-keeping.

Module Descriptions

1. hospital_appointment.py

- It greets the user and then asks for the patient's information: name, mobile number, and address.
- Displays a menu of health check-ups.
- Retrieves the prices using the 'check_up_price.py' script.
- If the user confirms the booking, the code fetches a random available date and time from 'time_slot.py' and displays it.
- Saves basic details into a text file and provides confirmation or thank you message.

2. check_up_price.py

- Defines hardcoded prices for various check-ups in INR.
- Exposes a dictionary-like function that retrieves test prices.
- Supports health tests like CBC, BMP, LFT, Thyroid Profile, Lipid Profile, and Diabetes Panels.

3. time_slot.py

- Prompts the user for the current date, then generates the next four available dates for possible appointments.
- Offers two time slots per date: "8 A.M. to 12 P.M." and "1 P.M. to 6 P.M."
- Returns randomly chosen slots, emulating real-world availability.

Overview of Workflow

1. The user launches the interface and inputs patient information.
2. The system shows the available check-ups with prices.
3. The patient chooses a check-up and views the fee.
4. The program allots and displays an available date and time when a booking is confirmed.
5. Patient details and the chosen slot are saved.

Overview of Testing –

Functional testing is performed through manual command-line inputs for standard paths: booking, selection of check-up and cancellation.

Logic is simple and modular, but no advanced unit or integration test scripts are present.

User feedback is reviewed for input validation and flow errors.

Conclusion

The Hospital Appointment Interface efficiently demonstrates modular command-line management of hospital appointments, including patient data capture, check-up pricing, and basic slot allocation.

The modular script design allows for a host of future enhancements to be added easily-some examples include database integration, more robust error checking, and an increased selection of available time slots or tests.