

HOSPITAL MANAGEMENT SYSTEM

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CODE

ubuntu [Running] - Oracle VirtualBox

File Machine View Input Devices Help

Nov 28 18:20

vboxuser@ubuntu: ~

```
#!/bin/bash

hospitals="hospitals.txt"
patients="patients.txt"

# Create hospital data file
cat > $hospitals <<EOF
Apollo Delhi 30 2500 4.8
Fortis Mumbai 20 1800 4.5
AIIMS Delhi 50 3000 5.0
SunHospital Bhopal 15 1500 4.2
Medanta Gurgaon 40 2700 4.9
EOF

# Create patient data file
cat > $patients <<EOF
Rahul 25 Fever
Sneha 40 Diabetes
Amit 60 HeartProblem
EOF

while true
do
    echo "----- Hospital Management System -----"
    echo "1. Print Hospital Data"
    echo "2. Print Patient Data"
    echo "3. Sort by Bed Price"
    echo "4. Sort by Available Beds"
    echo "5. Sort by Name"
    echo "6. Sort by Rating"
    echo "7. Print Hospital of Specific City"
    echo "0. Exit"
    echo -n "Enter choice: "
    read choice

    case $choice in
        1) echo "---- Hospital Data ----"
"Project.sh" 71 lines, 1735 bytes
```

ubuntu [Running] - Oracle VirtualBox

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Nov 28 18:21

vboxuser@ubuntu:~

```
case $choice in
    1) echo "---- Hospital Data ----"
       column -t $hospitals ;;

    2) echo "---- Patient Data ----"
       column -t $patients ;;

    3) echo "---- Sorted by Bed Price ----"
       sort -k4 -n $hospitals | column -t ;;

    4) echo "---- Sorted by Available Beds ----"
       sort -k3 -n -r $hospitals | column -t ;;

    5) echo "---- Sorted by Name ----"
       sort -k1 $hospitals | column -t ;;

    6) echo "---- Sorted by Rating ----"
       sort -k5 -n -r $hospitals | column -t ;;

    7) echo -n "Enter city name: "
       read city
       echo "---- Hospitals in $city ----"
       grep -i "$city" $hospitals | column -t ;;

    8) echo "Exiting..."
       exit ;;

    *) echo "Invalid choice!" ;;
esac

echo -n "Do you want to continue? (y/n): "
read ans
if [ "$ans" != "y" ]; then
    break
fi
```

Problem Statement

The goal of this project is to develop a Hospital Management System using Linux Shell Programming (bash).

The system should store hospital information such as name, city, available beds, price per bed, and ratings.

The user should be able to:

Print all hospital data

Print patient data

Sort hospitals by bed price

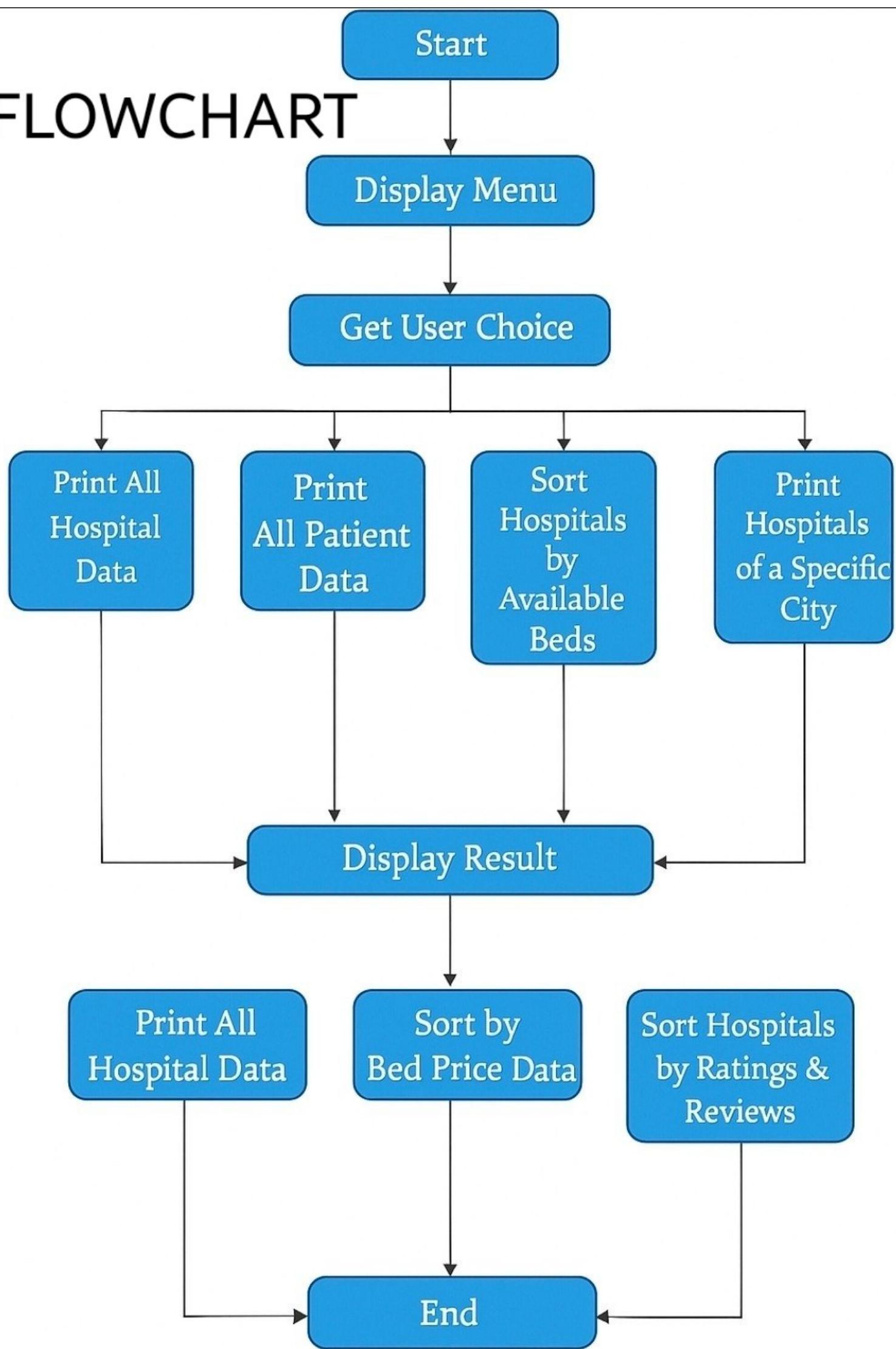
Sort by available beds

Sort by hospital name

Sort by rating

Search hospitals by city

FLOWCHART



ALGORITHM

Step 1. Start program.

Step 2. Store hospital data in a text file.

Step 3. Store patient data in a text file.

Step 4. Display a menu to the user.

Step 5. Ask for user choice.

Step 6. If the user chooses:

Print data → Display file contents.

Sort data → Use UNIX sort command
with correct column.

Search by city → Use grep.

Step 7. Ask if the user wants to continue.

Step 8. Repeat until the user selects exit.

Step 9. End program.

SNIPPET OF CODE

```
case $choice in
```

- 1) column -t \$hospitals ;;**
- 2) column -t \$patients ;;**
- 3) sort -k4 -n \$hospitals | column -t ;;**
- 4) sort -k3 -n -r \$hospitals | column -t ;;**
- 5) sort -k1 \$hospitals | column -t ;;**
- 6) sort -k5 -n -r \$hospitals | column -t ;;**
- 7) echo -n "Enter city name: "**

```
    read city
```

```
    grep -i "$city" $hospitals | column -t ;;
```

- 0) echo "Exiting..."**

```
    exit ;;
```

- *) echo "Invalid choice!" ;;**

```
esac
```

```
echo -n "Do you want to continue? (y/n): "
```

```
read ans
```

```
[ "$ans" != "y" ] && break
```

PROBLEMS FACED

1. Sorting by specific column

Needed to understand correct sort -k column_number.

2. Formatting Output

Output looked messy until column -t command was used.

3. City Search

grep -i was required for case-insensitive search.

4. Data Storage

Needed to maintain a consistent file format for sorting.

5. Menu Loop

Ensuring the script repeated until exit option was selected.

OUTPUT

Nov 28 18:24

vboxuser@ubuntu:~



```
vboxuser@ubuntu:~$ vi Project.sh
vboxuser@ubuntu:~$ chmod +x Project.sh
vboxuser@ubuntu:~$ ./Project.sh
```

----- Hospital Management System -----

- 1. Print Hospital Data
- 2. Print Patient Data
- 3. Sort by Bed Price
- 4. Sort by Available Beds
- 5. Sort by Name
- 6. Sort by Rating
- 7. Print Hospital of Specific City
- 0. Exit

Enter choice: 1

----- Hospital Data -----

| | | | | |
|-------------|---------|----|------|-----|
| Apollo | Delhi | 30 | 2500 | 4.8 |
| Fortis | Mumbai | 20 | 1800 | 4.5 |
| AIIMS | Delhi | 50 | 3000 | 5.0 |
| SunHospital | Bhopal | 15 | 1500 | 4.2 |
| Medanta | Gurgaon | 40 | 2700 | 4.9 |

Do you want to continue? (y/n): 2

```
vboxuser@ubuntu:~$ ./Project.sh
----- Hospital Management System -----
```

- 1. Print Hospital Data
- 2. Print Patient Data
- 3. Sort by Bed Price
- 4. Sort by Available Beds
- 5. Sort by Name
- 6. Sort by Rating
- 7. Print Hospital of Specific City
- 0. Exit

Enter choice: 2

----- Patient Data -----

| | | |
|-------|----|-------|
| Rahul | 25 | Fever |
|-------|----|-------|

| | | |
|-------|----|----------|
| Sneha | 40 | Diabetes |
|-------|----|----------|

| | | |
|------|----|--------------|
| Amit | 60 | HeartProblem |
|------|----|--------------|

Do you want to continue? (y/n): y

```
----- Hospital Management System -----
```

- 1. Print Hospital Data

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File Machine View Input Devices Help

Nov 28 18:24

vboxuser@ubuntu: ~

```
AIIMS      Delhi   50  3000  5.0
SunHospital Bhopal  15  1500  4.2
Medanta     Gurgaon 40  2700  4.9
Do you want to continue? (y/n): 2
vboxuser@ubuntu:~$ ./Project.sh
----- Hospital Management System -----
1. Print Hospital Data
2. Print Patient Data
3. Sort by Bed Price
4. Sort by Available Beds
5. Sort by Name
6. Sort by Rating
7. Print Hospital of Specific City
0. Exit
Enter choice: 2
---- Patient Data ----
Rahul 25 Fever
Sneha 40 Diabetes
Amit 60 HeartProblem
Do you want to continue? (y/n): y
----- Hospital Management System -----
1. Print Hospital Data
2. Print Patient Data
3. Sort by Bed Price
4. Sort by Available Beds
5. Sort by Name
6. Sort by Rating
7. Print Hospital of Specific City
0. Exit
Enter choice: 3
---- Sorted by Bed Price ----
SunHospital Bhopal  15  1500  4.2
Fortis      Mumbai   20  1800  4.5
Apollo      Delhi    30  2500  4.8
Medanta     Gurgaon 40  2700  4.9
AIIMS      Delhi   50  3000  5.0
Do you want to continue? (y/n): n
vboxuser@ubuntu:~$
```