FINAL PROJECT REPORT

ABOUT

REGISTRATION AND BOOKING SYSTEM ON “WANGSAF” HOSPITAL

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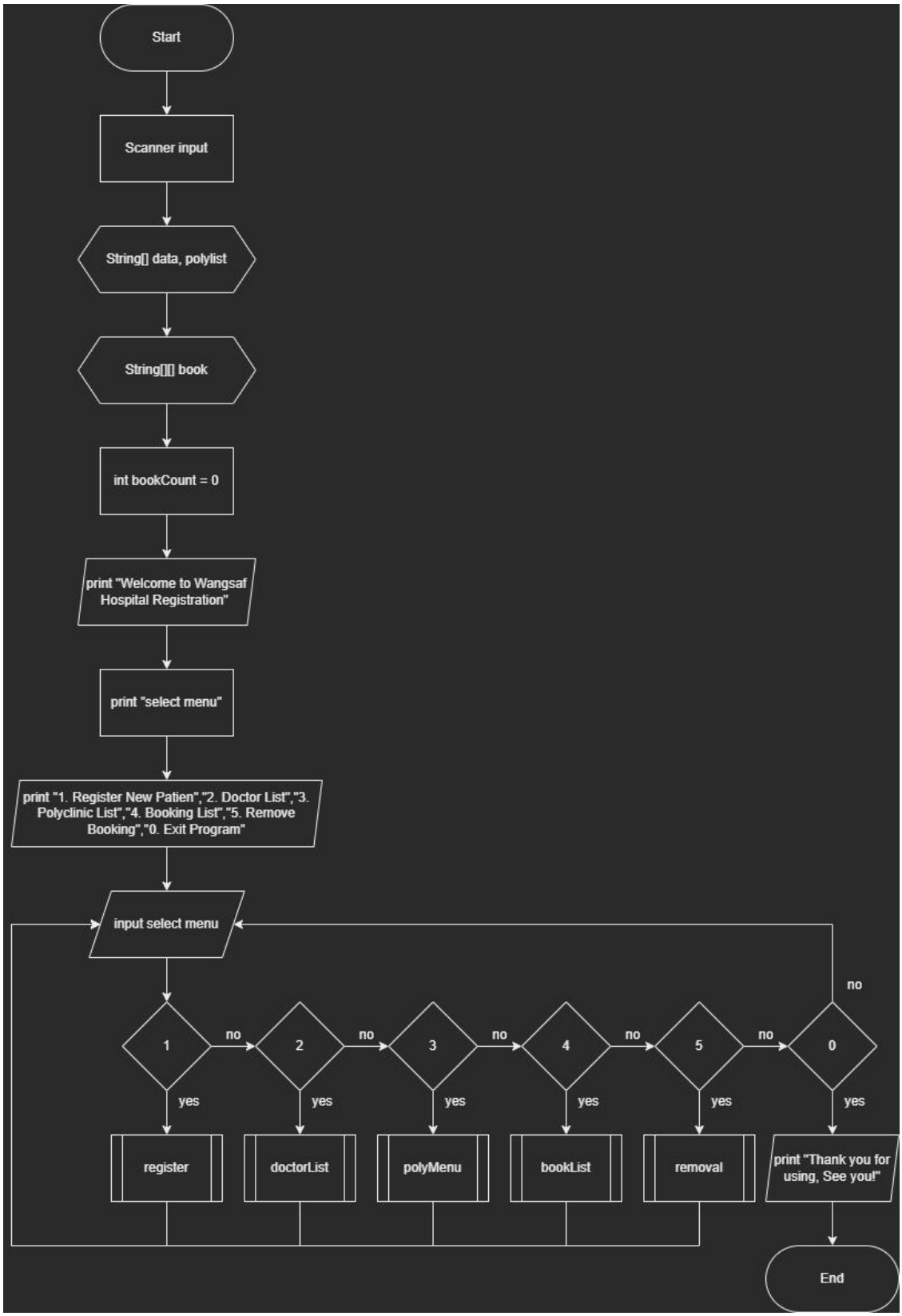
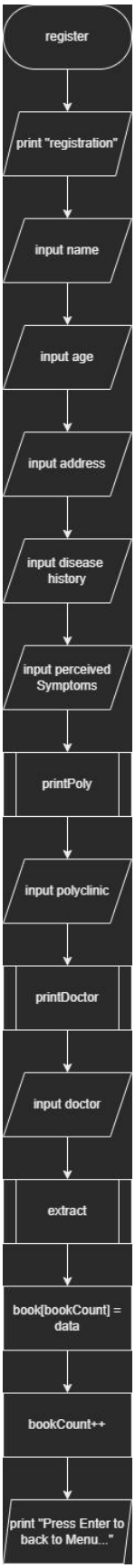
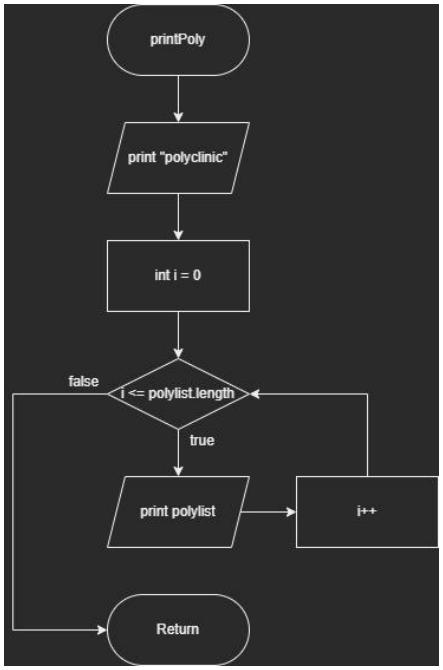
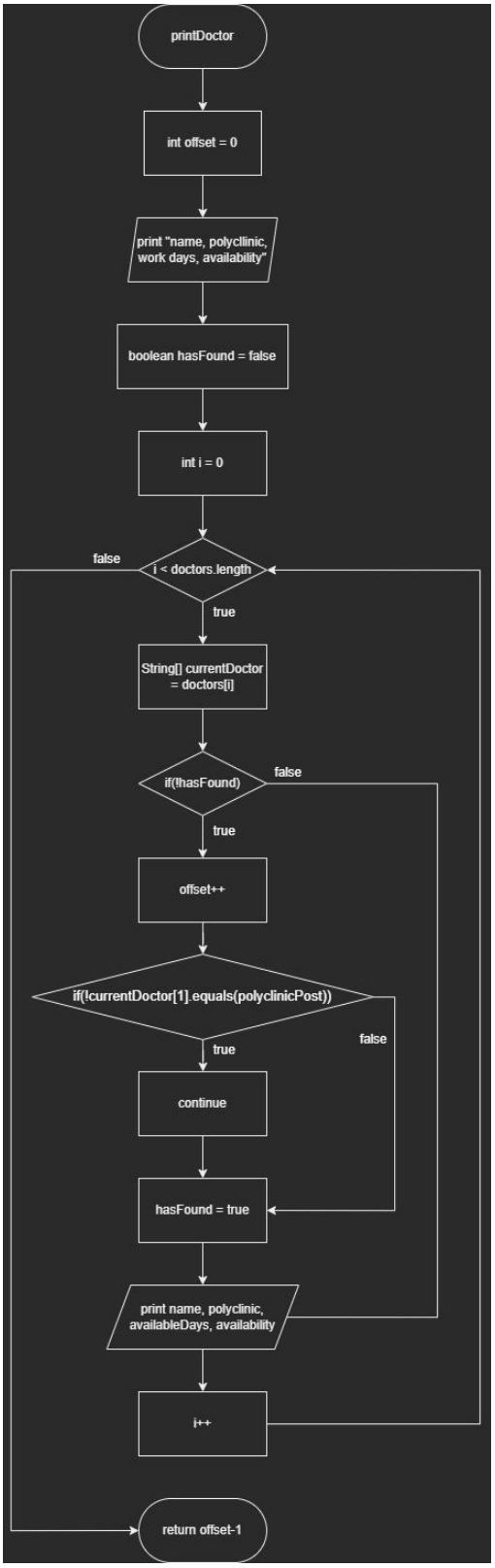
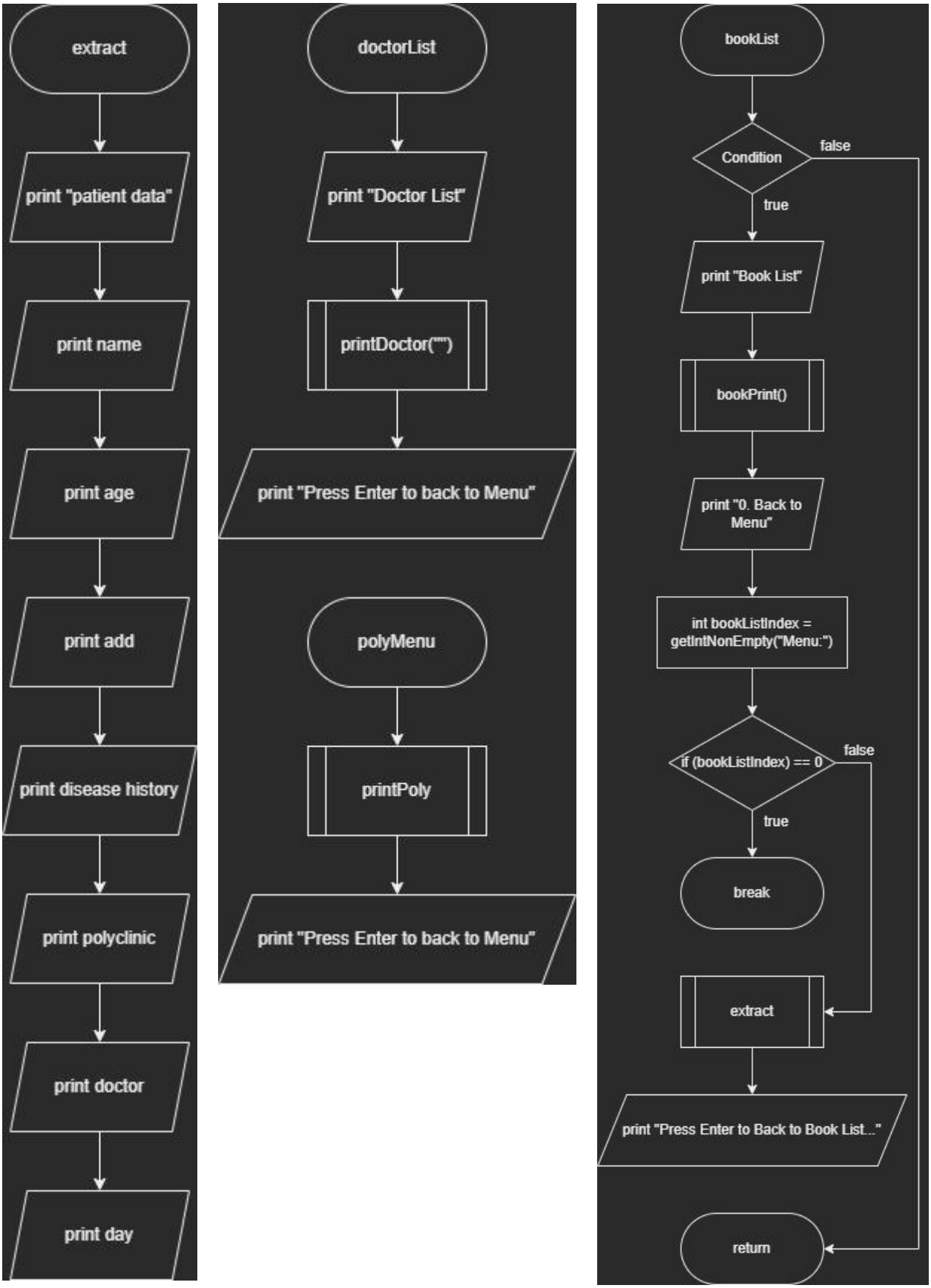
1.1 Flowchart

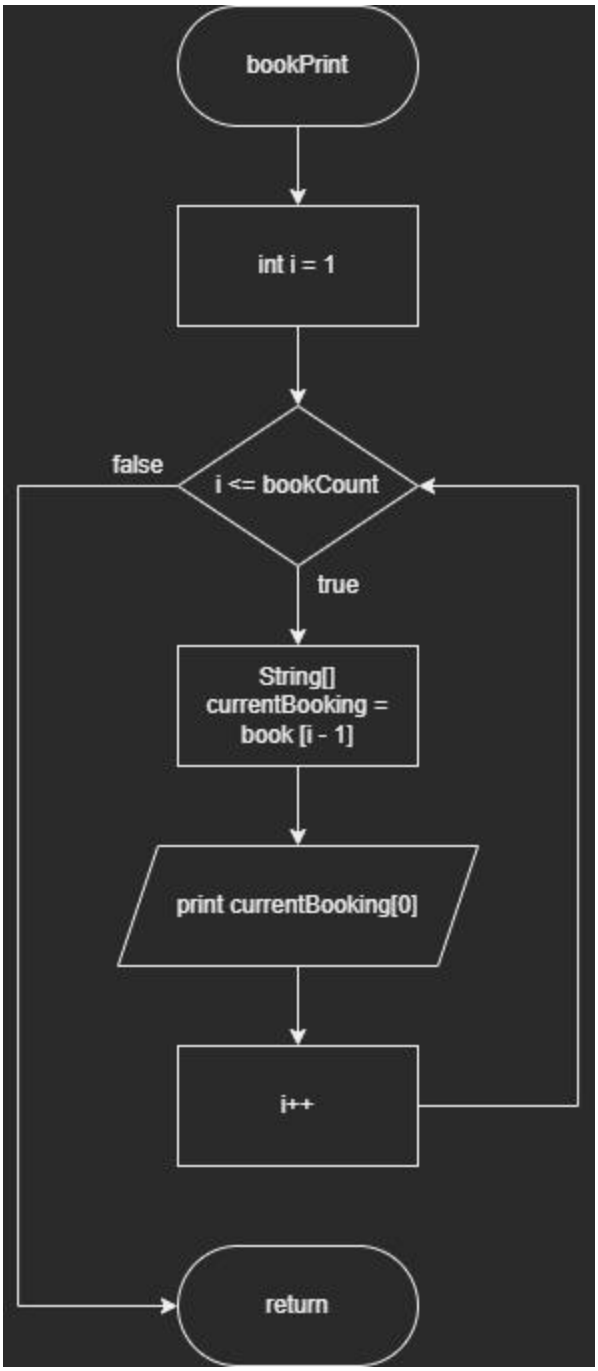


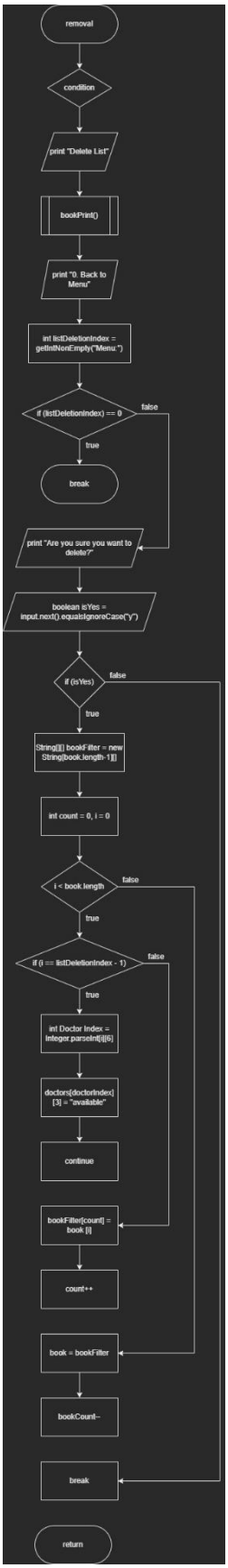

register
print "registration"
input name
input age
input address
input disease history
input perceived Symptoms
printPoly
input polyclinic
printDoctor
input doctor
extract
book[bookCount] = data
bookCount++
print "Press Enter to back to Menu..."


printPoly
print "polyclinic"
int i = 0
false
i <= polylist.length
true
print polylist
i++
Return


printDoctor
int offset = 0
print "name, polycllinic, work days, availability"
boolean hasFound = false
int i = 0
false
i < doctors.length
true
String[] currentDoctor = doctors[i]
if(!hasFound)
false
true
offset++
if(!currentDoctor[1].equals(polyclinicPost))
false
true
continue
hasFound = true
print name, polyclinic, availableDays, availability
i++
return offset-1


extract
print "patient data"
print name
print age
print add
print disease history
print polyclinic
print doctor
print day
doctorList
print "Doctor List"
printDoctor("")
print "Press Enter to back to Menu"
polyMenu
printPoly
print "Press Enter to back to Menu"
bookList
Condition
false
true
print "Book List"
bookPrint()
print "0. Back to Menu"
int bookListIndex = getIntNonEmpty("Menu:")
if (bookListIndex) == 0
false
true
break
extract
print "Press Enter to Back to Book List..."
return

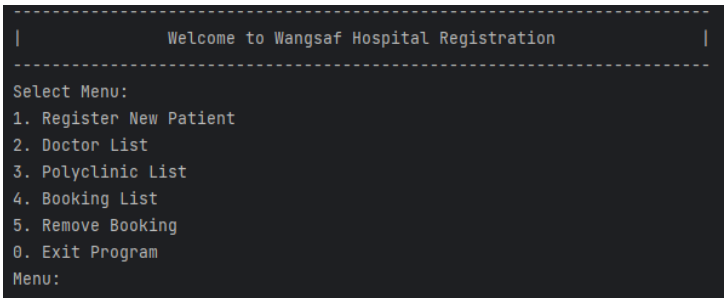

bookPrint
int i = 1
false
i <= bookCount
true
String[] currentBooking = book [i - 1]
print currentBooking[0]
i++
return


removal
condition
print "Delete List"
bookPrint()
print "0. Back to Menu"
int listDeletionIndex = getIntNonEmpty("Menu:")
if (listDeletionIndex) == 0
false
true
break
print "Are you sure you want to delete?"
boolean isYes = input.next().equalsIgnoreCase("y")
if (isYes)
false
true
String[][] bookFilter = new String[book.length-1][]
int count = 0, i = 0
i < book.length
false
true
if (i == listDeletionIndex - 1)
false
true
int Doctor Index = Integer.parseInt(i][6]
doctors[doctorIndex] [3] = "available"
continue
bookFilter[count] = book [i]
count++
book = bookFilter
bookCount--
break
return

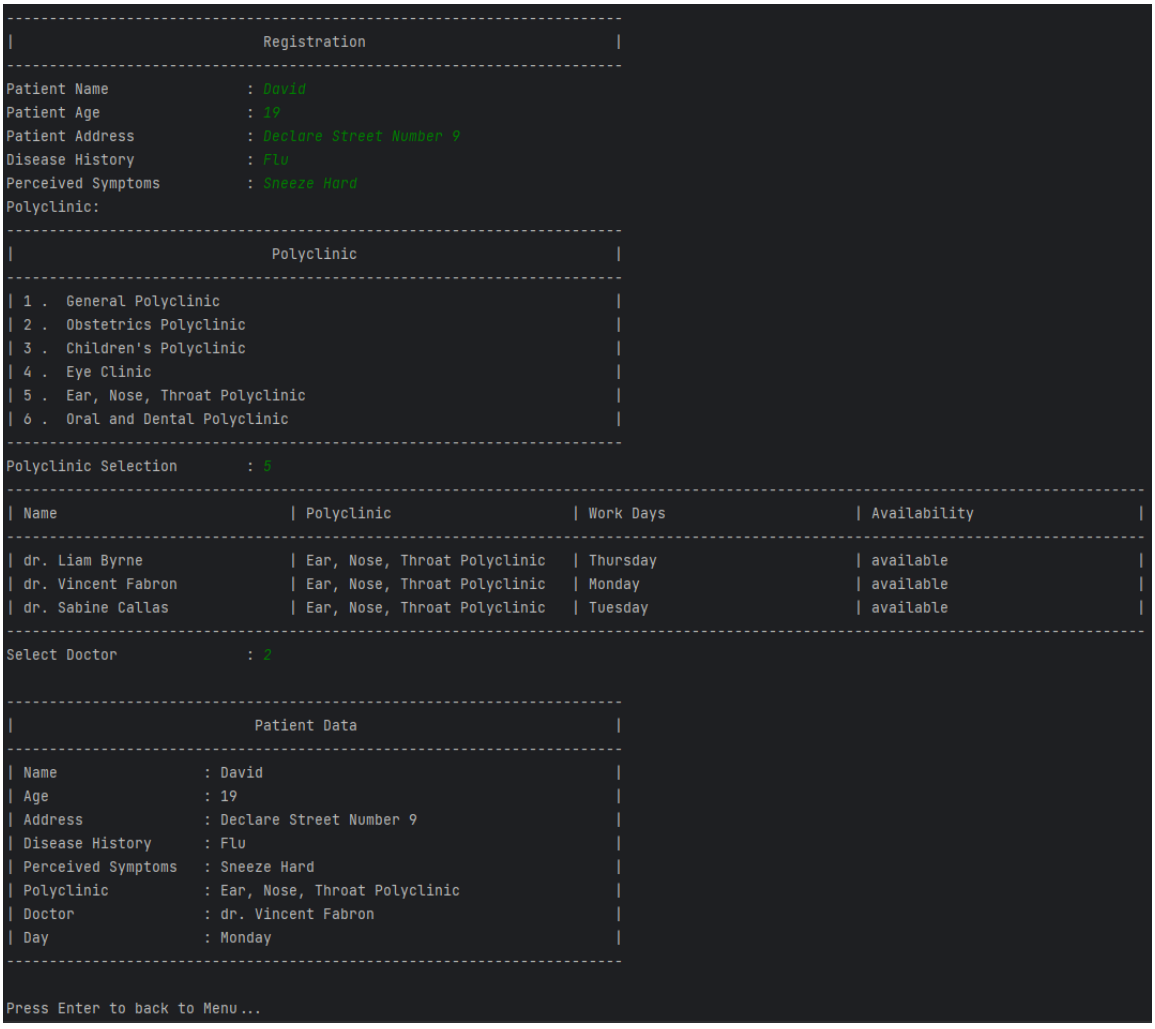
1.2 Steps to Run the Program

The following are the steps for running the application

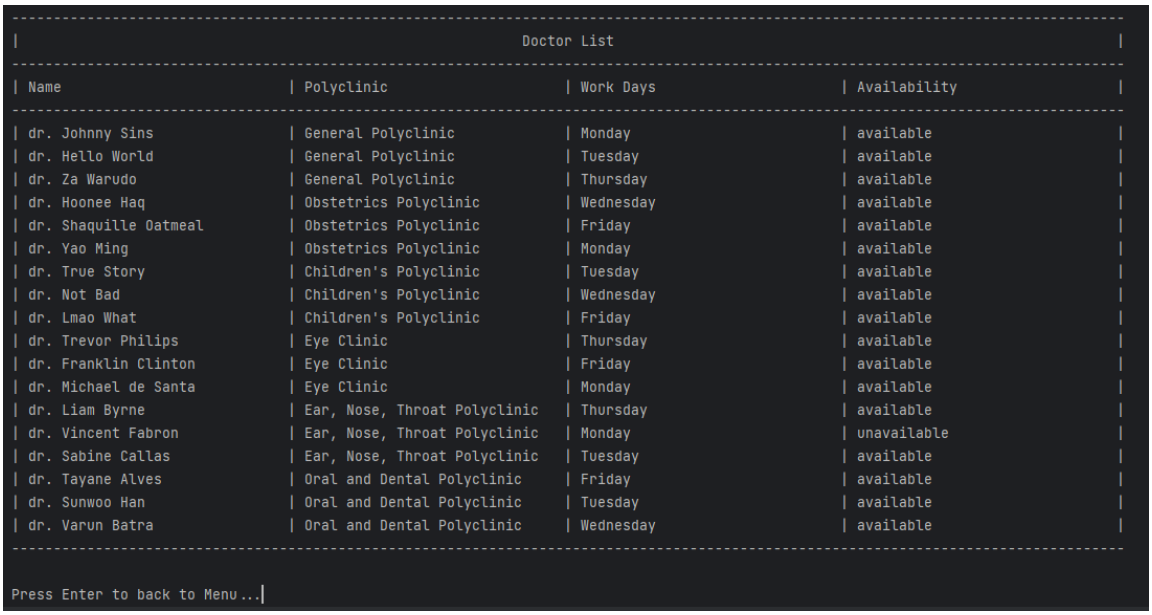
1. This application consists of 6 menus, namely Register New Patient, Doctor List, Polyclinic List, Booking List, Remove Booking, and Exit Program



2. The first menu is Register New Patient, where we need to register all the patient data, selecting polyclinic and the doctor



3. The second menu is consisting of the list of all Doctor, the availability will change to unavailable once we select the Doctor from the Registration menu

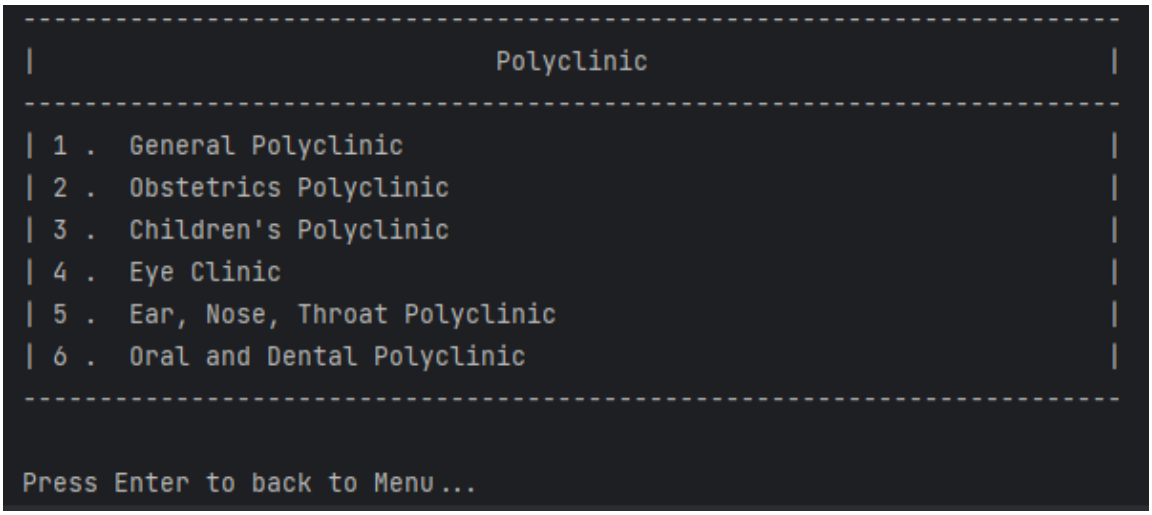


```
Doctor List

| Name                    | Polyclinic                  | Work Days          | Availability |
| dr. Johnny Sins         | General Polyclinic          | Monday             | available    |
| dr. Hello World         | General Polyclinic          | Tuesday            | available    |
| dr. Za Warudo           | General Polyclinic          | Thursday           | available    |
| dr. Hoonee Haq          | Obstetrics Polyclinic       | Wednesday          | available    |
| dr. Shaquille Oatmeal   | Obstetrics Polyclinic       | Friday             | available    |
| dr. Yao Ming            | Obstetrics Polyclinic       | Monday             | available    |
| dr. True Story          | Children's Polyclinic       | Tuesday            | available    |
| dr. Not Bad             | Children's Polyclinic       | Wednesday          | available    |
| dr. Lmao What           | Children's Polyclinic       | Friday             | available    |
| dr. Trevor Philips      | Eye Clinic                  | Thursday           | available    |
| dr. Franklin Clinton    | Eye Clinic                  | Friday             | available    |
| dr. Michael de Santa    | Eye Clinic                  | Monday             | available    |
| dr. Liam Byrne          | Ear, Nose, Throat Polyclinic| Thursday           | available    |
| dr. Vincent Fabron      | Ear, Nose, Throat Polyclinic| Monday             | unavailable  |
| dr. Sabine Callas       | Ear, Nose, Throat Polyclinic| Tuesday            | available    |
| dr. Tayane Alves        | Oral and Dental Polyclinic  | Friday             | available    |
| dr. Sunwoo Han          | Oral and Dental Polyclinic  | Tuesday            | available    |
| dr. Varun Batra         | Oral and Dental Polyclinic  | Wednesday          | available    |

Press Enter to back to Menu...
```

4. The third menu is showing all available Polyclinic

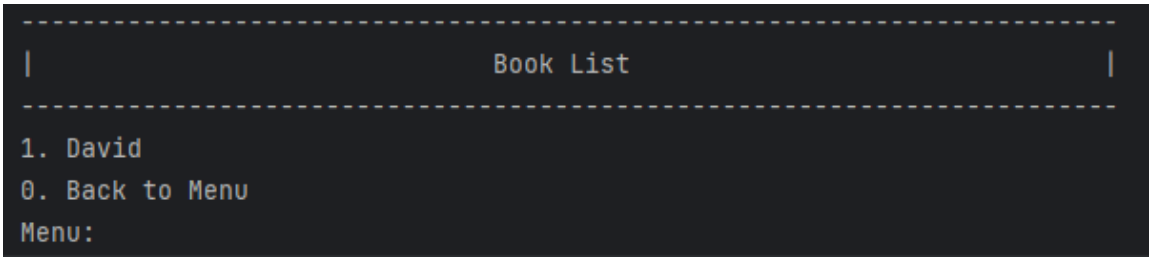


```
Polyclinic

| 1 .  General Polyclinic
| 2 .  Obstetrics Polyclinic
| 3 .  Children's Polyclinic
| 4 .  Eye Clinic
| 5 .  Ear, Nose, Throat Polyclinic
| 6 .  Oral and Dental Polyclinic

Press Enter to back to Menu...
```

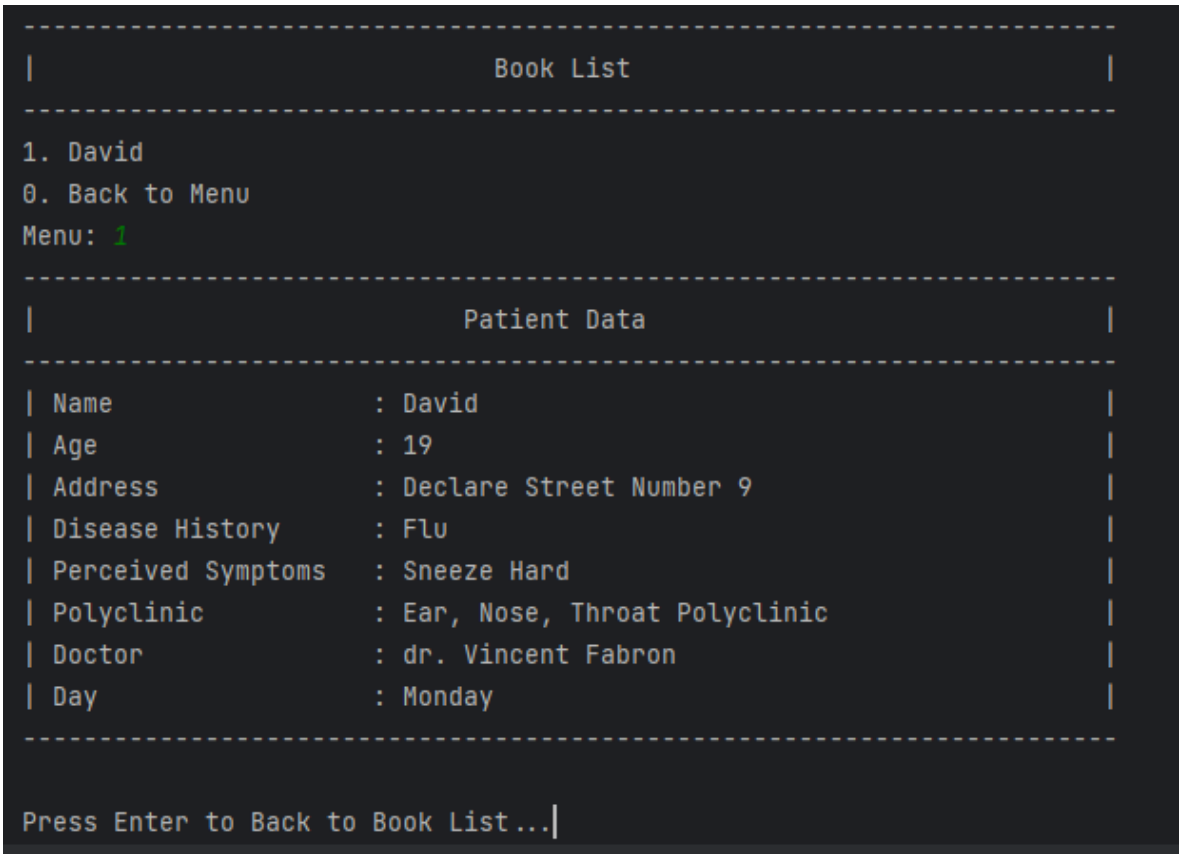
5. The fourth menu showing all the Booking list, the maximum list in the Booking is 5 patients



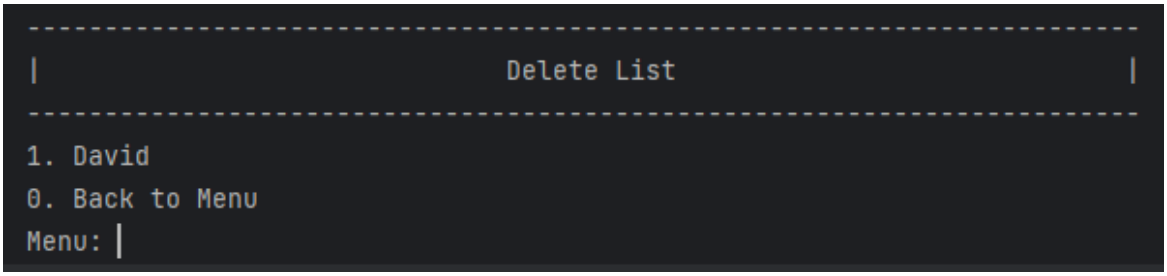
```
Book List

1. David
0. Back to Menu
Menu:
```

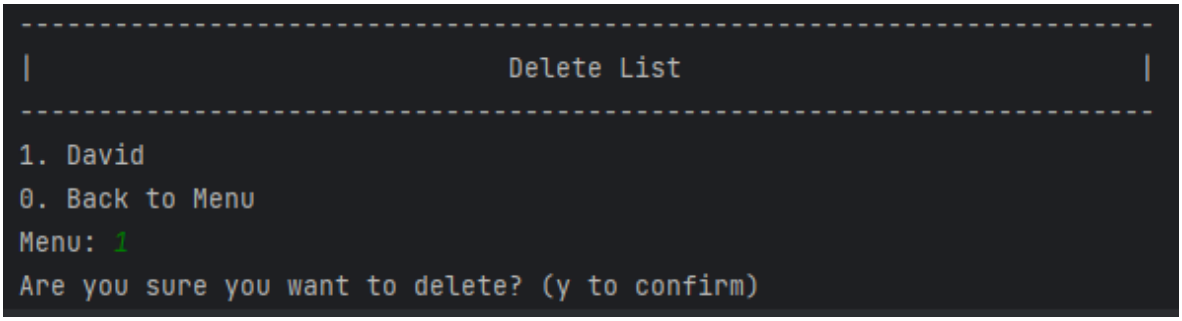
6. In the Booking list menu, we can see the patient data again by selecting the patient number in the list



7. The Fifth menu is to delete the booking list



8. To delete the list, we select the number that we wanted to delete



9. Once we select the number, we need to type ‘y’ or “Y” to confirm

```
Are you sure you want to delete? (y to confirm) y
------------------------------------------------------------------------
|                              Delete List                             |
------------------------------------------------------------------------
0. Back to Menu
Menu:
```

10. And the last menu is to exit the program

```
------------------------------------------------------------------------
|              Welcome to Wangsaf Hospital Registration                |
------------------------------------------------------------------------
Select Menu:
1. Register New Patient
2. Doctor List
3. Polyclinic List
4. Booking List
5. Remove Booking
0. Exit Program
Menu: 0
Thank you for using, See you!

Process finished with exit code 0
```

1.3 Program Code

```
import java.util.Scanner;
public class TA
{
    static void text(String expression)
    {
        System.out.print(expression);
    }

    static void textln(String expression)
    {
        System.out.println(expression);
    }

    static Scanner input = new Scanner(System.in);
    static String[] data = new String[9];
    static String[] polylist = {"General Polyclinic", "Obstetrics
Polyclinic", "Children's Polyclinic", "Eye Clinic", "Ear, Nose, Throat
Polyclinic", "Oral and Dental Polyclinic"};
    static String[][] book = new String[18][9];
    static int bookCount = 0;
    static String[][] doctors = {
            {"dr. Johnny Sins", "0","Monday","available"},
```

```
            {"dr. Hello World","0","Tuesday","available"},
            {"dr. Za Warudo","0","Thursday","available"},
            {"dr. Hoonee Haq","1","Wednesday","available"},
            {"dr. Shaquille Oatmeal","1","Friday","available"},
            {"dr. Yao Ming","1","Monday","available"},
            {"dr. True Story","2","Tuesday","available"},
            {"dr. Not Bad","2","Wednesday","available"},
            {"dr. Lmao What","2","Friday","available"},
            {"dr. Trevor Philips","3","Thursday","available"},
            {"dr. Franklin Clinton","3","Friday","available"},
            {"dr. Michael de Santa","3","Monday","available"},
            {"dr. Liam Byrne","4","Thursday","available"},
            {"dr. Vincent Fabron","4","Monday","available"},
            {"dr. Sabine Callas","4","Tuesday","available"},
            {"dr. Tayane Alves","5","Friday","available"},
            {"dr. Sunwoo Han","5","Tuesday","available"},
            {"dr. Varun Batra","5","Wednesday","available"}
    };

    static String getCanEmpty(String message)
    {
        text(message);
        return input.nextLine();

    }

    static String getNonEmpty(String message, String errorMsg)
    {
        while (true)
        {
            text(message);
            String userInput = input.nextLine();
            if (!userInput.isEmpty()) {
                return userInput;
            }
            text(errorMsg);
        }
    }

    static int getIntNonEmpty(String message, String errorMsg, int min, int
max)
    {
        while (true)
        {
            text(message);
            int userInput = input.nextInt();
            input.nextLine();
            if (userInput > min && userInput < max)
            {
                return userInput;
            }
            text(errorMsg);
        }
    }

    public static void printPoly()
    {
```

```
        textln("-----------------------------------------------------------------
-----------");
        System.out.printf("| %28s %s %-28s |\n", " ", "Polyclinic", " ");
        textln("-----------------------------------------------------------------
-----------");
        for (int i = 1; i <= polylist.length; i++)
        {
            System.out.printf("| %d %s %-63s |\n", i, ". ", polylist[i - 1]);
        }
        textln("-----------------------------------------------------------------
-----------");
    }

    public static void polyMenu()
    {
        printPoly();
        text("\nPress Enter to back to Menu...");
        input.nextLine();
    }

    private static void bookPrint()
    {
        for (int i = 1; i <= bookCount; i++)
        {
            String[] currentBooking = book[i - 1];
            System.out.printf("%d. %s\n", i, currentBooking[0]);
        }
    }

    static int printDoctor(String polyclinicPost)
    {
        int offset = 0;
        textln("-----------------------------------------------------------------
-------------------------------------------------------------------------");
        System.out.printf("| %-30s | %-30s | %-30s | %-30s |\n", "Name",
"Polyclinic", "Work Days","Availability");
        textln("-----------------------------------------------------------------
-------------------------------------------------------------------------");
        boolean hasFound = false;
        for (int i = 0; i < doctors.length; i++)
        {
            String[] currentDoctor = doctors[i];
            if (!polyclinicPost.isEmpty())
            {
                if(!hasFound) offset++;
                //ngga match
                if(!currentDoctor[1].equals(polyclinicPost))
                {
                    continue;
                }
                hasFound = true;
            }
            String name = currentDoctor[0];
            String polyclinic = polylist[Integer.parseInt(currentDoctor[1])];
            String availableDays = currentDoctor[2];
            String availability = currentDoctor[3];
```

```
            System.out.printf("| %-30s | %-30s | %-30s | %-30s |\n", name,
polyclinic, availableDays, availability);
        }
        textln("-------------------------------------------------------------------
-------------------------------------------------------------------------");
        return offset-1;
    }

    private static void register()
    {
        if (bookCount > 4)
        {
            textln("");
            textln("The booking has reached limit! (5 book)");
        }
        else
        {
            textln("-------------------------------------------------------------
---------------");
            textln("|                                Registration
|");
            textln("-------------------------------------------------------------
---------------");
            data[0] = getNonEmpty("Patient Name\t\t\t\t: ", "Patient Name
can't be Empty!\n");
            data[1] = String.format("%d", getIntNonEmpty("Patient
Age\t\t\t\t\t: ", "Patient Age can't be below 0 and beyond 200!\n", 0, 201));
            data[2] = getNonEmpty("Patient Address\t\t\t\t: ", "Patient
Address can't be Empty!\n");
            data[3] = getCanEmpty("Disease History\t\t\t\t: ");
            data[4] = getNonEmpty("Perceived Symptoms\t\t\t: ", "Perceived
Symptoms can't be Empty!\n");
            textln("Polyclinic: ");
            printPoly();
            data[5] = String.format("%d", getIntNonEmpty("Polyclinic
Selection\t\t: ", "Please select Polyclinic Correctly!\n", 0, polylist.length
+ 1));
            int polyclinicIndex = Integer.parseInt(data[5]) - 1;
            String polyclinic = polylist[polyclinicIndex];
            int offset = printDoctor(String.format("%d", polyclinicIndex));
            String doctorName;
            String availableDays;
            while (true)
            {
                data[6] = String.format("%d", getIntNonEmpty("Select
Doctor\t\t\t\t: ", "Please Select Doctor Correctly!\n", 0, 4) - 1 + offset);
                int doctorIndex = Integer.parseInt(data[6]);
                String[] doctor = doctors[doctorIndex];
                doctorName = doctor[0];
                availableDays = doctor[2];
                boolean isDoctorAvailable = doctor[3].equals("available");
                doctor[3] = "unavailable";
                if (isDoctorAvailable) break;
                textln("Doctor isn't available right now, please choose
another Doctor!");
                data[6] = null;
            }
```

```
            textln("");
            extract(data[0], data[1], data[2], data[3], data[4], polyclinic,
doctorName, availableDays);
            book[bookCount][0] = data[0];
            book[bookCount][1] = data[1];
            book[bookCount][2] = data[2];
            book[bookCount][3] = data[3];
            book[bookCount][4] = data[4];
            book[bookCount][5] = data[5];
            book[bookCount][6] = data[6];
            book[bookCount][7] = data[7];
            bookCount++;
            textln("");
            text("Press Enter to back to Menu...");
            input.nextLine();
        }
    }

    private static void booklist()
    {
        do
        {
            textln("-------------------------------------------------------------
---------------");
            textln("|                                Book List
|");
            textln("-------------------------------------------------------------
---------------");
            bookPrint();
            textln("0. Back to Menu ");
            int bookListIndex = getIntNonEmpty("Menu: ", "Please choose menu
correctly!\n", -1, bookCount+1);
            if (bookListIndex == 0)
            {
                break;
            }
            String[] bookSelect = book[bookListIndex - 1];
            int polyclinicIndex = Integer.parseInt(bookSelect[5]);
            String polyclinic = polylist[polyclinicIndex - 1];
            int doctorIndex = Integer.parseInt(bookSelect[6]);
            String doctor = doctors[doctorIndex][0];
            String daySelection = doctors[doctorIndex][2];
            extract(bookSelect[0], bookSelect[1], bookSelect[2],
bookSelect[3], bookSelect[4], polyclinic, doctor, daySelection);
            textln("");
            text("Press Enter to Back to Book List...");
            input.nextLine();
        }
        while (true);
    }

    private static void removal()
    {
        do
        {
            textln("-------------------------------------------------------------
---------------");
```

```
            textln("|                                  Delete List
|");
            textln("-------------------------------------------------------------
--------------");
            bookPrint();
            textln("0. Back to Menu ");
            int listDeletionIndex = getIntNonEmpty("Menu: ", "Please choose
menu correctly!\n", -1, bookCount+1);
            if (listDeletionIndex == 0)
            {
                break;
            }

            text("Are you sure you want to delete? (y to confirm) ");
            boolean isYes = input.next().equalsIgnoreCase("y");

            if (isYes)
            {
                String[][] bookFilter = new String[book.length-1][];
                int count = 0;
                for (int i = 0; i < book.length; i++)
                {
                    if (i == listDeletionIndex - 1) {
                        int doctorIndex = Integer.parseInt(book[i][6]);
                        doctors[doctorIndex][3] = "available";
                        continue;
                    }
                    bookFilter[count] = book[i];
                    count++;
                }
                book = bookFilter;
                bookCount--;
            }
        }
        while(true);
    }

    public static void extract(String name, String age, String add, String
dis, String sym, String poly, String doc, String day)
    {
        textln("-------------------------------------------------------------
-----------");
        textln("|                              Patient Data
|");
        textln("-------------------------------------------------------------
-----------");
        System.out.printf("| %-20s : %-45s |\n","Name",name);
        System.out.printf("| %-20s : %-45s |\n", "Age",age);
        System.out.printf("| %-20s : %-45s |\n", "Address",add);
        System.out.printf("| %-20s : %-45s |\n", "Disease History",dis);
        System.out.printf("| %-20s : %-45s |\n", "Perceived Symptoms",sym);
        System.out.printf("| %-20s : %-45s |\n", "Polyclinic",poly);
        System.out.printf("| %-20s : %-45s |\n", "Doctor",doc);
        System.out.printf("| %-20s : %-45s |\n", "Day",day);
        textln("-------------------------------------------------------------
-----------");
    }
```

```
    private static void doctorsList()
    {
        textln("------------------------------------------------------------------
--------------------------------------------------------------------------------");
        System.out.printf("| %-58s %11s %58s |\n"," ","Doctor List"," ");
        printDoctor("");
        textln("");
        text("Press Enter to back to Menu...");
        input.nextLine();
    }

    public static void main(String[] args) {
        int menu;
        do
        {
            textln("------------------------------------------------------------
---------------");
            textln("|               Welcome to Wangsaf Hospital Registration
|");
            textln("------------------------------------------------------------
---------------");
            textln("Select Menu:");
            textln("1. Register New Patient");
            textln("2. Doctor List");
            textln("3. Polyclinic List");
            textln("4. Booking List");
            textln("5. Remove Booking");
            textln("0. Exit Program");
            menu = getIntNonEmpty("Menu: ", "Please choose menu
correctly!\n", -1, 6);
            switch (menu) {
                case 1:
                    register();
                    break;
                case 2:
                    doctorsList();
                    break;
                case 3:
                    polyMenu();
                    break;
                case 4:
                    booklist();
                    break;
                case 5:
                    removal();
                    break;
                case 0:
                    textln("Thank you for using, See you!");
                    break;
            }
        }
        while (menu != 0);
    }
}
```