Hospital Queue

        After BPJS being published in Jakarta, **Quasar Hospital** get so many patient. To make it easier to manage its Hospital, the CTO of the hospital hire some programmers. You as one of the programmer of **Quasar Hospital** are asked to create a queue program with requirement below:

1. We don't know the numbers of the patient. So, the apps must be developed using Linked List.
2. We have four class of hospital room (Basic, VIP, Super VIP, Emergency)
3. The queue must be arranged in priority as below:
   a. Emergency always in front of Super VIP, VIP and Basic.
   b. Basic always behind VIP.
   c. VIP always behind Super VIP.
   d. Super VIP always in front of VIP and Basic.
4. You are suggested to use Double Linked List Queue.
5. This application has menu to show patient list.

Please look image below for more information or run the **QuasarHospital**.exe to have an insight.

Using linked list (**Struct Given**):

```
struct Quasar{
        char patient_name[25];
        int priorityLevel;
        int age;
        struct Quasar *next, *prev;
}*head, *tail;
```

Main Menu:

```
Patient: 0 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]:
```

Menu 1 - Add Patient:

```
Patient: 0 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]: 1

Input Patient Name [1..25]: SilverStone
1. Emergency
2. Super VIP
3. VIP
4. Basic
Select Class [1..4]: 4

Input Age [1..110]: 10
```

Validate:

1. Full name must be more than 1 character and less than 25 characters.
2. Class must between 1 and 4.
3. Age must between 1 and 110.

Menu 2 - Call Patient:

If patient exist:

```
Quasar Hospital Queue
----------------------------------------------------
1. Emergency  :        WATERMELON SISTER (11)
2. Super VIP  :           KAILASH KENZIE (110)
3. Basic      :             SILVERSTONE  (10)

Patient: 3 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]: 2

Attention Please!!

Patient from Emergency Room,
With name WATERMELON SISTER, 11 years
Please moving ahead to Administration Room..
```

If no patient:

```
Patient: 0 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]: 2

No Patient to be called..
```

Menu 3 – Remove All Patient List:

```
Quasar Hospital Queue
----------------------------------------------------
1. Super VIP  :           KAILASH KENZIE (110)
2. Basic      :             SILVERSTONE (10)

Patient: 2 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]: 3

All patient list has been purged
```

Menu 4 – Exit:

```
Patient: 0 people(s)

Quasar Queue 1.3
================
1. Add Patient
2. Call Patient
3. Remove All Patient List
4. Exit
Select [1..4]: 4

Thank you for using Quasar 1.3
```

Thank you and Good Luck.