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Class : CE(2) C - Batch

MEDICAL DIAGNOSIS GRADING AND TREATMENT SYSTEM ACCORDING TO PATIENT SEVERITY

1. Ideate

The idea is to let the patient choose their condition/disease in the form of grades and to be treated according to the severity of their disease/condition and not to let any resources go to waste.

2. Research

This project is created using C language concepts. The purpose of this project is to minimise the wastage of medical resources and allocate it to patients which truly need it. Information on this topic is gathered with the help of various links like :

1. <https://pmc.ncbi.nlm.nih.gov/articles/PMC4195109/>
2. [https://www.clinicalmicrobiologyandinfection.org/article/S1198-743X\(14\)60897-1/fulltext](https://www.clinicalmicrobiologyandinfection.org/article/S1198-743X(14)60897-1/fulltext)

3. Analysis

1. To create an interface in which patients can find their medical condition in the form of grade and the system will allocate proper resources and proper staff to monitor the patient
2. To use concepts of C such as loops, conditional statements, logical operators etc.
3. Improve it through the feedback of patients

4. Build

The code is built in this phase

```
#include <stdio.h>
```

```
void main() {  
    char grade;
```

```
    printf("Enter patient severity grades (A, B, C, D).\n");  
    printf("Grades explanation : \n A : Near death  
condition or critically injured \n ");  
    printf("B : Multiple Fracture or Deep cuts \n ");  
    printf("C : Minor Injury or High Fever \n ");  
    printf("D : Minor Cold or Cough \n ");  
    printf("\n");
```

```

printf("Enter grade: ");
scanf("%c", &grade);

if (grade == 'A' || grade == 'a') {
    printf("Severity: Critical\nResources allocated:\n-
ICU Bed\n- Ventilator\nStaff assigned:\n- Intensivist\n-
Senior Nurse\n");
}
else if (grade == 'B' || grade == 'b') {
    printf("Severity: High\nResources allocated:\n- High
Dependency Unit\nStaff assigned:\n- Specialist
Physician\n- Nurse\n");
}
else if (grade == 'C' || grade == 'c') {
    printf("Severity: Moderate\nResources allocated:\n-
General Ward\nStaff assigned:\n- General Physician\n-
Junior Nurse\n");
}
else if (grade == 'D' || grade == 'd') {
    printf("Severity: Low\nResources allocated:\n-
Outpatient Care\nStaff assigned:\n- General
Practitioner\n");
}
else {
    printf("Invalid grade. Please enter A, B, C, D \n");
}

}

```

5. Testing

Case 1 : A Grade Emergency

Enter patient severity grades (A, B, C, D)

Grades explanation :

A : Near death condition or critically injured

B : Multiple Fracture or Deep cuts

C : Minor Injury or High Fever

D : Minor Cold or Cough

Enter grade: A

Severity: Critical

Resources allocated:

- ICU Bed
- Ventilator

Staff assigned:

- Intensivist
- Senior Nurse

=== Code Execution Successful ===

Case 2 : B Grade Emergency

Enter patient severity grades (A, B, C, D)

Grades explanation :

A : Near death condition or critically injured

B : Multiple Fracture or Deep cuts

C : Minor Injury or High Fever

D : Minor Cold or Cough

Enter grade: B

Severity: High

Resources allocated:

- High Dependency Unit

Staff assigned:

- Specialist Physician

- Nurse

=== Code Execution Successful ===

Case 3 : C Grade Emergency

Enter patient severity grades (A, B, C, D)

Grades explanation :

A : Near death condition or critically injured

B : Multiple Fracture or Deep cuts

C : Minor Injury or High Fever

D : Minor Cold or Cough

Enter grade: C

Severity: Moderate

Resources allocated:

- General Ward

Staff assigned:

- General Physician

- Junior Nurse

=== Code Execution Successful ===

Case 4 : D Grade Emergency

Enter patient severity grades (A, B, C, D)

Grades explanation :

A : Near death condition or critically injured

B : Multiple Fracture or Deep cuts

C : Minor Injury or High Fever

D : Minor Cold or Cough

Enter grade: D

Severity: Low

Resources allocated:

- Outpatient Care

Staff assigned:

- General Practitioner

=== Code Execution Successful ===

Case 5 : Invalid Input

Enter patient severity grades (A, B, C, D)

Grades explanation :

A : Near death condition or critically injured

B : Multiple Fracture or Deep cuts

C : Minor Injury or High Fever

D : Minor Cold or Cough

Enter grade: E

Invalid grade. Please enter A, B, C, D

=== Code Execution Successful ===