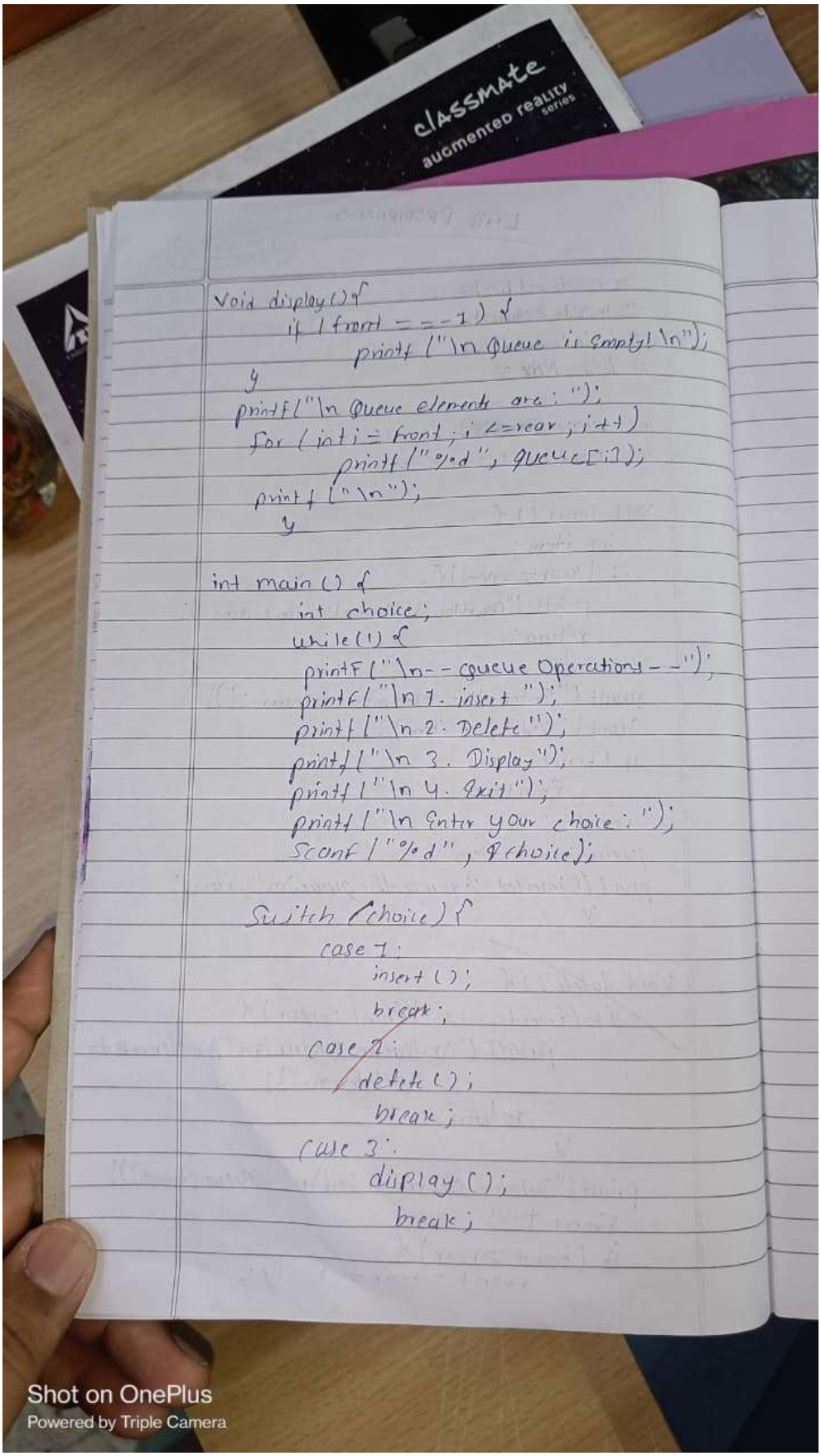

"C:\c dsa\Third lab program
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
Underflow!,empty queue cannot delete
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
enter the item to insert:
6
inserted 6 into the queue
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
enter the item to insert:
7
inserted 7 into the queue
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
enter the item to insert:
8
inserted 8 into the queue
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
Overflow!, cannot insert the element
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 3
The queue elements are:678
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
Deleted 6 from the queue
--- queue operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice: 4
Process returned 0 (0x0) execution time : 103.129 s
Press any key to continue.

LAB-PROGRAM-3

```
#include<stdio.h>
#include<stdio.h
#include<stdlib.h>
#define MAX 5

int queue [MAX];
int front = -1, rear = -1;

Void insert () {
   int item;
   if (rear == N-1) {
      printf ("Overflow !, cannot insert item");
      return;
      }
   printf ("Enter the element to insert :");
   Scanf ("%d", & item);
   if (front = -1)
       Front = 0;
   rear++;
   queue [rear] = item;
   printf ("inserted %d into the queue.\n", item);
      }

Void delete () {
   if (front == -1 || front > rear) {
       printf ("\n Queue underflow! No elements to
                delete. \n");
       return;
      }
   printf ("Deleted element : %d\n", queue [front]);
    front ++;
    if (front > rear) {
        Front = rear = -1; } }
```



```
void display() {
    if (front == -1) {
        printf("\n Queue is Empty! \n");
    }
    printf("\n Queue elements are: ");
    for (int i = front; i <= rear; i++)
        printf("%d", queue[i]);
    printf("\n");
}

int main() {
    int choice;
    while(1) {
    printF("\n-- Queue Operations --");
    printf("\n 1. insert ");
    printf("\n 2. Delete");
    printf("\n 3. Display");
    printf("\n 4. Exit");
    printf("\n Enter your choice: ");
    scanf("%d", &choice);

Switch (choice) {
    case 1:
        insert();
        break;
    case 2:
        delete();
        break;
    case 3:
        display();
        break;
```

```
        case 4:
            exit(0);
        default:
            printf("\n Invalid choice!");
        }
    }
    return 0;
}
```

Output

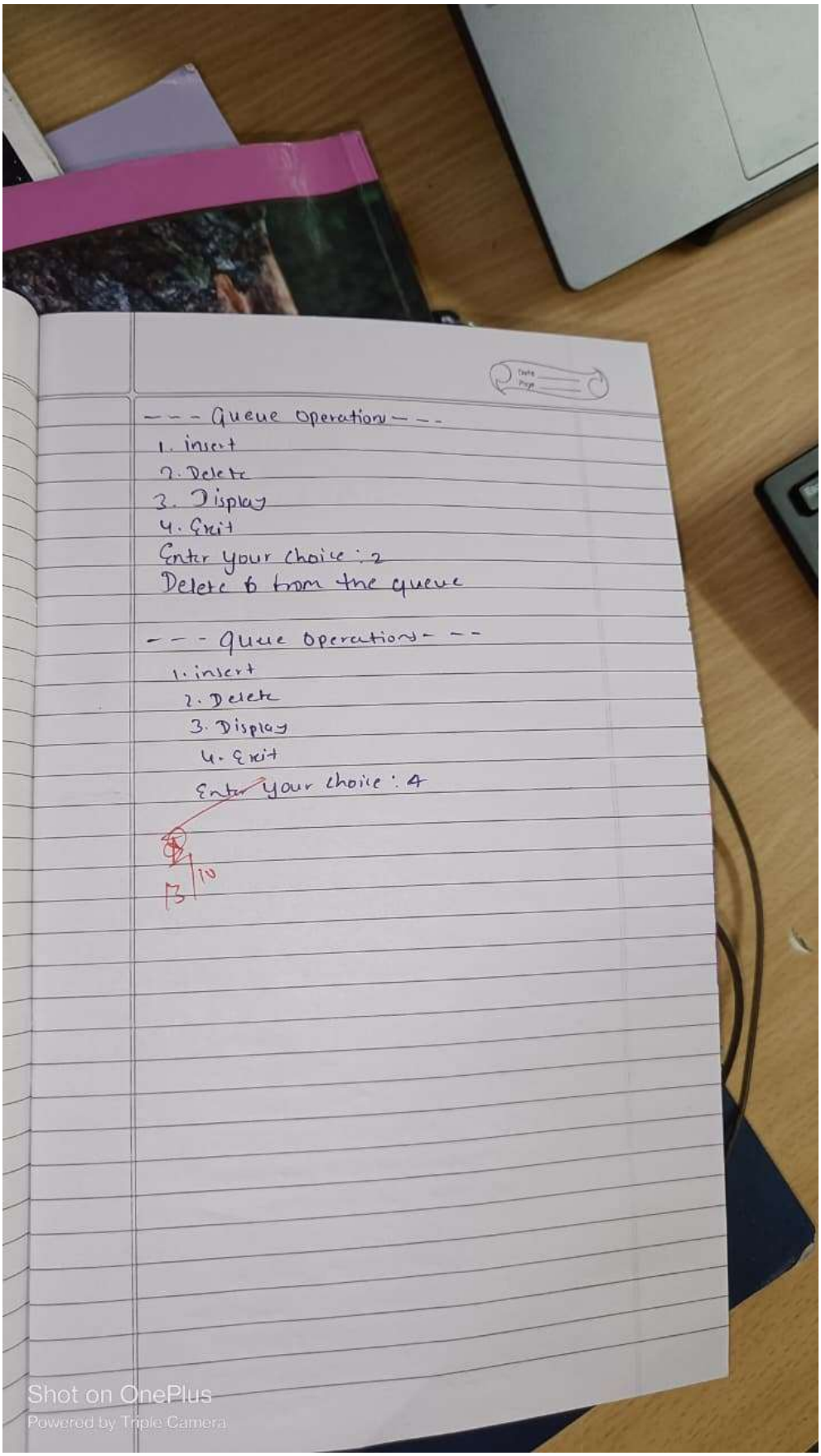
```
---Queue Operations---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
Underflow! empty queue cannot delete

---Queue Operations---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice: 1
enter the item to insert: 6
inserted 6 into the queue

---Queue Operations---
1. insert
2. Delete
3. Display
4. Exit
```

Enter your choice : 1
Enter the item to insert : 7
inserted 7 into the queue

--- queue Operations ---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice : 1
Enter the item to insert : 8
inserted 8 into the queue

--- queue Operations ---
1. Insert
2. Delete
3. Display
4. Exit
Enter your choice : 1
Overflow !, cannot insert the element

--- Queue Operations ---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice : 3
The queue elements are : 6 7 8


--- Queue Operations ---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice: 2
Delete 6 from the queue
--- Queue Operations ---
1. insert
2. Delete
3. Display
4. Exit
Enter your choice: 4
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