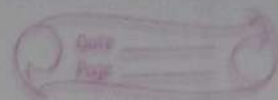


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- 4) C program using structure to find whether student need to pay fine or not for the issued book in the college library. If the issued book crosses 3 months from the date of issue, the student has to pay fine per day ₹50.

```
-> #include <stdio.h>
#include <string.h>
#include <math.h>
```

```
struct student {
    int roll-no;
    char name[50];
    struct Date {
        int D;
        int m;
        int Y;
    } issue_date, today_date;
};
```

```
int main() {
    int month, day, extra_months, extra_days, total_days;
    bookent;
    long int fine;
    struct student a;
    printf("Enter student details in");
    printf("-----in");
    printf("Enter Roll no: ");
    scanf("%d", &a.roll-no);
```

```

printf("Enter name: ");
scanf("%s", a.name);
printf("Enter the issue-date: ");
scanf("%d/%d/%d", &a.issue-date.D,
        &a.issue-date.M, &a.issue-date.Y);
printf("Enter today-date: ");
scanf("%d/%d/%d", &a.today-date.D, &a.today-
        date.M, &a.today-date.Y);

```

```

month = a.today-date.M - a.issue-date.M;
days = a.today-date.D - a.issue-date.D;

```

```

printf("-----");
printf("It %d Months", month);
printf("It %d days", days);

```

```

if (month >= 3 & days != 0)
{
    printf("\n enter rec book amount");
    scanf("%d", &bookamt);
    printf("\n need to pay fine");
}

```

```

extramonth = month - 3;
totaldays = extramonth * 30 + days;
printf("\n find fine = %ld", fine);
}

```

```

else {
    printf("\n Thank You! for returning paying
        within the time period");
}

```

```

return 0;
}

```


[Output]

Enter Student Details:

Enter Roll-number : 1

Enter name : Adarsh

Enter issue-date : 01

01

23

Enter today-date : 03

03

23

--- 2 Months 2 days

Thank You! for paying ~~or~~ returning within
time period

for
18/12/25

6) ~~Pointer~~ ^{Array} program Pointer & Array program

→ #include <stdio.h>

```
int main() {
```

```
    int arr[5] = {2, 4, 6, 8, 10};
```

```
    for (int i = 0; i < 5; i = i + 1) {
```

```
        printf(" [index %d] Address: %.u, Value: %.d \n", i, &arr[i],  
               *(arr+i));
```

```
    }
```

```
    return 0;
```

```
}
```

[Output]

```
[index 0] Address: 1717789840, Value: 2  
[index 1] Address: 1717789844, Value: 4  
[index 2] Address: 1717789848, Value: 6  
[index 3] Address: 1717789852, Value: 8  
[index 4] Address: 1717789856, Value: 10
```

Done
18/12/23

7) Dynamic memory allocation

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

```
#include <stdlib.h>
```

```
int main() {
```

```
    int *ptr-1;
```

```
    char *ptr-2;
```

```
    float *ptr-3;
```

```
    ptr-1 = (int*) malloc (1 * sizeof(int));
```

```
    ptr-2 = (char*) malloc (1 * sizeof(char));
```

```
    ptr-3 = (float*) malloc (1 * sizeof(float));
```

```
    printf("Enter the value for integer pointer position: ");
```

```
    scanf("%d", ptr-1);
```

```
    printf("Enter the value for char pointer: ");
```

```
    scanf("%c", ptr-2);
```

```
    printf("Enter the value for float pointer: ");
```

```
    scanf("%f", ptr-3);
```

```
    printf("The value stored in integer pointer  
is: %d\n", ptr-1);
```

```
    printf("The value stored in character pointer  
is: %c\n", ptr-2);
```

```
    printf("The value stored in float pointer  
is: %f\n", ptr-3);
```

```
    free(ptr-1);
```

```
    free(ptr-2);
```

```
    free(ptr-3);
```

```
return 0;  
}
```

Output

Enter the value for integer pointer: 23

Enter the value for char pointer: a

Enter the value for float pointer: 20.6

The value stored in integer pointer is: 23

The value stored in char pointer is: a

The value stored in float pointer is: 20.6

~~Ser~~
18/12/23