VIT - Vellore

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BCSE102P_Structured and Object Oriented Programming Lab_VL2024250502365

VIT V_Structured and OOP_Lab 3_COD_Hard_Pointer Arithmetic

Attempt : 1
Total Mark : 20
Marks Obtained : 20

Section 1 : Coding

1. Problem Statement

Kathir aims to create a program to determine the total ticket cost for an upcoming event, considering his age and the quantity of tickets he intends to buy.

The available ticket types are Basic (Rs. 150.0) and VIP (Rs. 300.0), each priced differently. The program should apply age-based discounts and utilize pointers for price calculations.

Discount Calculation:

If Kathir's age is less than 18, he will receive a 10% discount on Basic tickets.If Kathir's age is 18 or older, he will receive a 5% discount on VIP tickets.

Formulas Used: Total Cost = Discounted Price * Number of Tickets, where
Discounted Price = Original Price - (Original Price * Discount Percentage)

Answer

```c
// You are using GCC
#include<stdio.h>
int main()
{
    int age;
    int n;
    double total;
    scanf("%d",&age);
    scanf("%d",&n);
    int *pn = &n;
    if (age<18){
        total = (*pn)*(150*0.9);
    }
    else{
        total = (*pn)*(300*0.95);
    }
    printf("Rs.%.2lf",total);
    return 0;
}
```

Status : Correct   **Marks : 10/10**

2. Problem Statement

Dev wants to write a program for a school project that takes an integer
input and calculates the sum of its odd digits using pointer arithmetic.

Help him by writing the code.

Answer

```c
// You are using GCC
#include<stdio.h>
int main(){
    int n;
    scanf("%d",&n);
```

```c
int *pn = &n;
int sum = 0;
while(*pn != 0){
    if(((*pn)%10)%2 !=0){
        sum+=((*pn)%10);
    }
    *pn = ((*pn)/10);
}
printf("%d",sum);
return 0;
}
```

Status : Correct   **Marks : 10/10**