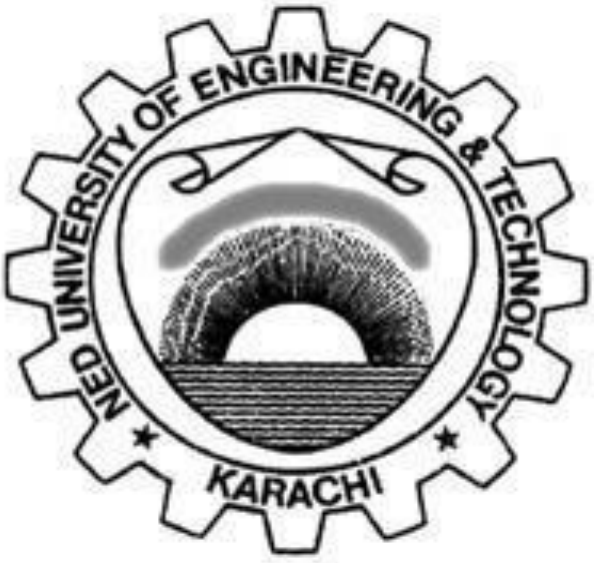
Practical Workbook

CT-175
PROGRAMMING FUNDAMENTALS



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EXERCISE Q# 01

You must have seen the question before deleting anything like "Are you sure to delete [Y/y] / [N/n] ? Create a program that asks for this question if user enters Y or y it prints "Deleted successfully". If the user enters N or n it prints "Delete cancelled" otherwise it prints choose the right option using switch statement.

```
#include<stdio.h>
int main(){
    char a;
    printf("Are you sure to delete [Y/y] / [N/n]");
    scanf("%c", &a);
    switch (a)
    {
        case 'Y':
        printf("Deleted Successfully");
        break;
        case 'y':
        printf("Deleted Successfully");
        break;
        case 'N':
        printf("Delete Cancelled");
        break;
        case 'n':
        printf("Delete Cancelled");
        break;
        default:
        printf("Choose the right option");
        break;

    }
}
```

OUTPUT:

```
Are you sure to delete [Y/y] / [N/n]y
Deleted Successfully
E:\Hamna Uni Files\Semester 1\PF\Practi
Are you sure to delete [Y/y] / [N/n]V
Choose the right option
E:\Hamna Uni Files\Semester 1\PF\Practi
Are you sure to delete [Y/y] / [N/n]Y
Deleted Successfully
E:\Hamna Uni Files\Semester 1\PF\Practi
Are you sure to delete [Y/y] / [N/n]N
Delete Cancelled
E:\Hamna Uni Files\Semester 1\PF\Practi
Are you sure to delete [Y/y] / [N/n]n
Delete Cancelled
E:\Hamna Uni Files\Semester 1\PF\Practi
```

EXERCISE Q# 03

Write a program in which user enters his NTS and F.Sc marks and your program will help student in selection of university. Based on these marks Student will be allocated a seat at different department of different university.

Oxford

IT: Above 70% in Fsc. and 70 % in NTS

Electronics: Above 70% in Fsc. and 60 % in NTS

Telecommunication Above 70% in Fsc. and 50 % in NTS

MIT

IT: 70% - 60 % in Fsc. and 50 % in NTS

Chemical: 59% – 50 % in Fsc. and 50 % in NTS

Computer: Above 40% and below 50 % in Fsc. and 50 % in NTS

```c
#include<stdio.h>
int main(){
    int fsc, nts;
    printf("Enter your F.Sc marks: ");
    scanf("%d",&fsc);
    printf("Enter your NTS marks: ");
    scanf("%d",&nts);
    if(fsc>100 || nts>100 || fsc<0 || nts<0){
        printf("Invalid. Marks can't be greater than 100 or less than 0");
        return 1;
        }else if (fsc>70 && nts>70){
```

```
            printf("Congratulation! You've secured your seat in Oxford
University(IT department)");
        }else if(fsc>70 && nts>60){
            printf("Congratulation! You've secured your seat in Oxford
University(Electronics department)");
        }else if(fsc>70 && nts>50){
            printf("Congratulation! You've secured your seat in Oxford
University(Telecommunication department)");
        }else if(fsc>=60 && fsc<=70 && nts>50 ){
            printf("Congratulation! You've secured your seat in MIT University(IT
department)");
        }else if(fsc>50 && fsc<=59 && nts>50){
 printf("Congratulation! You've secured your seat in MIT University(Chemical
department)");
        }else if(fsc>40 && fsc<50 && nts>50){
            printf("Congratulation! You've secured your seat in MIT
University(Computer department)");
        }else{
            printf("Sorry,your marks aren't enough for the admission criteria of
Oxford and MIT university.");
        }
    return 0;
}
```

OUTPUT:

```
Enter your F.Sc marks: 59
Enter your NTS marks: 40
Sorry,your marks aren't enough for the admission criteria of Oxford and MIT university.
E:\Hamna Uni Files\Semester 1\PF\Practical\Code>r.exe
Enter your F.Sc marks: 70
Enter your NTS marks: 70
Congratulation! You've secured your seat in MIT University(IT department)
E:\Hamna Uni Files\Semester 1\PF\Practical\Code>r.exe
Enter your F.Sc marks: 89
Enter your NTS marks: 90
Congratulation! You've secured your seat in Oxford University(IT department)
```

EXERCISE Q# 04

Using IF and Switch statement, write a program that displays the following menu for the food items available to take order from the customer:

B= Burger (Rs. 200)
F= French Fries (Rs. 50)
P= Pizza (Rs. 500)
S= Sandwiches (Rs. 150)

The costumer can order any combination of available food. The program first ask to enter the no of types of snacks i.e. 2, 3 or 4 then it ask to enter the choice i.e. B for Burger and then for quantity. The program should finally display the total charges for the order.


```c
#include <stdio.h>
int main() {
    char choice;
    int quantity, total = 0, types, i;

    printf("ABC Restaurant Online Order Placement\n");
    printf("WELCOME!\n\n");
    printf("Please select from the following Menu\n");
    printf("B= Burger (Rs. 200)\n");
    printf("F= French Fries (Rs. 50)\n");
    printf("P= Pizza (Rs. 500)\n");
    printf("S= Sandwiches (Rs. 150)\n");

    printf("How many types of snacks do you need to order (2, 3, or 4)? ");
    scanf("%d", &types);

    if(types < 2 || types > 4) {
        printf("Invalid number of types. Please order 2, 3, or 4 types.\n");
```

```
        return 1;
    }
    for(i = 1; i <= types; i++) {
        printf("Enter snack type %d (B, F, P, S): ", i);
        scanf(" %c", &choice);

        printf("Please provide quantity: ");
        scanf("%d", &quantity);
        switch(choice) {
            case 'B':
            case 'b':
                printf("%d Burger(s) value %d PKR\n",quantity,200 * quantity);
                total += 200*quantity;
                break;
            case 'F':
            case 'f':
                printf("%d French Fries value %d PKR\n",quantity,50 * quantity);
                total += 50*quantity;
                break;
            case 'P':
            case 'p':
                printf("%d Pizza(s) value %d PKR\n",quantity,500 * quantity);
                total += 500*quantity;
                break;
            case 'S':
            case 's':
                printf("%d Sandwich(es) value %d PKR\n",quantity,150 * quantity);
                total += 150*quantity;
                break;
            default:
                printf("Invalid choice. Please select from the available
options.\n");
                return 1;
        }
    }
    printf("---------------------------------------\n");
    printf("Total: %d PKR\n", total);
    printf("Thank you for your order... have a nice day.\n");
    return 0;
}
```

OUTPUT:

```
Please select from the following Menu
B= Burger (Rs. 200)
F= French Fries (Rs. 50)
P= Pizza (Rs. 500)
S= Sandwiches (Rs. 150)
How many types of snacks do you need to order (2, 3, or 4)? 2
Enter snack type 1 (B, F, P, S): B
Please provide quantity: 2
2 Burger(s) value 400 PKR
Enter snack type 2 (B, F, P, S): P
Please provide quantity: 1
1 Pizza(s) value 500 PKR
----------------------------------------
Total: 900 PKR
Thank you for your order... have a nice day.
```