

Programming Exercise

Exercise 1:

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

```
void main()
```

```
{  
    int workingHrs, overtimeHrs;
```

```
    int basicSalary, overtimeSalary, totalSalary;
```

```
    int payRate = 15000;
```

```
    int overtimePayRate = 200;
```

```
    printf("Enter working hours: ");
```

```
    scanf("%d", &workingHrs);
```

```
    printf("Enter overtime hours: ");
```

```
    scanf("%d", &overtimeHrs);
```

```
    basicSalary = payRate * workingHrs;
```

```
    overtimeSalary = overtimePayRate * overtimeHrs;
```

```
    totalSalary = basicSalary + overtimeSalary;
```

```
    printf("Total Salary = Rs. %d ", totalSalary);  
}
```

Exercise 2:

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

```
void main()
```

```
{
```

```
float celsius, fahrenheit;
printf("Enter temperature in Celsius: ");
scanf("%f", &celsius);
fahrenheit = (celsius * 9 / 5) + 32;
printf("%f Celsius = %f Fahrenheit", celsius, fahrenheit);
```

Exercise 3:

```
#include <stdio.h>
void main()
```

```
printf("* \t * \t * \t * \n1 \t 2 \t 3 \t 4 ");
```

```
*      *      *      *
1      2      3      4
```

Exercise 4:

```
#include <stdio.h>
void main()
```

```
{
printf("I am a Boy\nI live in Pakistan\nI am a proud Pakistani");
}
```

output

I am a boy
I live in Pakistan
I am a proud Pakist

Exercise 5:

```
#include <stdio.h>
void main()
```

```
int totalPrice, totalDiscount;
int discount1, discount2, discount3, discount4, discount5; ✓
int shirt1=423, shirt2=320, shirt3=270, shirt4=680, shirt5=520; ✓
discount1 = 423*0.15;
discount2 = 320*0.15;
discount3 = 270*0.15;
discount4 = 680*0.15;
discount5 = 520*0.15; ✓
totalDiscount=discount1+discount2+discount3+discount4+discount5;
totalPrice = (shirt1+shirt2+shirt3+shirt4+shirt5)-totalDiscount; ✓
printf("Amount of Discount available: Rs.%d", totalDiscount); 75
```

Exercise 6:

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

```
void main()
```

```
{  
    int a=23, b= 69;  
    printf("Before swapping");  
    printf("a: %d \t b: %d \n",a, b);  
    a = a + b;  
    b = a - b;  
    a = a - b;  
    printf("After swapping");  
    printf("a: %d \t b: %d \n",a, b);  
}
```

$$a = 23$$
$$b = 69$$

$$a = a + b$$
$$a = 23 + 69$$
$$b = a - b = 23$$
$$a = a - b = 69$$

Exercise 7:

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

```
void main()
```

```
int number, firstDig, lastDig, sum;
printf("Enter the number which is must be 5 digit: ");
scanf("%d", &number);
firstDig = number / 10000;
lastDig = number % 10;
sum = firstDig + lastDig;
printf("Sum = %d ", sum);
```

Exercise 8:

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

```
void main()
```

```
{
    int monthlyIncome, yearlyIncome, electricity, gas, food;
    int monthlyExp, yearlyExp, monthlySav, yearlySav, averageSav, averageExp;
    printf("Enter your Monthly Income: ");
    scanf("%d", &monthlyIncome);
    printf("Enter your Electricity Bill: ");
    scanf("%d", &electricity);
    printf("Enter your Gas Bill: ");
    scanf("%d", &gas);
    printf("Enter your food expense: ");
    scanf("%d", &food);
    yearlyIncome = (monthlyIncome*12);
    monthlyExp = electricity + gas + food;
    yearlyExp = monthlyExp*12;
    monthlySav = monthlyIncome-monthlyExp;
    yearlySav = yearlyIncome-yearlyExp;
    averageSav = monthlySav/12;
    averageExp = monthlyExp/12;
    printf("\nTotal Monthly Expenses: Rs.%d", monthlyExp);
    printf("\nTotal Yearly Expenses: Rs.%d", yearlyExp);
    printf("\nMonthly Savings: Rs.%d", monthlySav);
    printf("\nYearly Savings: Rs.%d", yearlySav);
    printf("\nAverage saving per month: Rs.%d", averageSav);
    printf("\nAverage expense per month: Rs.%d", averageExp);
}
```

Exercise 9:

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

```
void main()
```

```
    char ch;
```

```
    int noOfSteps;
```

```
    printf("Enter any character: ");
```

```
    scanf("%c", &ch);
```

```
    printf("Enter number of steps: ");
```

```
    scanf("%d", &noOfSteps);
```

```
    printf("New character : %c ",ch+noOfSteps);
```

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8

Exercise 10:

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

```
void main()
```

```
{
```

```
    float radius, area;
```

```
    printf("Enter the radius of a circle: \n");
```

```
    scanf("%f", &radius);
```

```
    area = 3.14159*radius*radius;
```

```
    printf("Area of the circle = %f", area);
```