

# Review Week

Serkan Türkeli

# Arithmetic Operations (Ex1)

Declare the height and weight variable.

Ask the user to enter the user's weight and height.

Display the information as shown below.

## SAMPLE OUTPUT

```
Please enter your height in meters : 1.73
```

```
Please enter your weight in kilogram : 66
```

```
Your height is 1.73 meters and your weight is 66.00 kilograms
```

# Arithmetic Operations (Ex2)

This program is used to calculate the monthly installment a person has to make for the purchase of a car.

- Declare a constant (const keyword) called RATE and assign it a value of 3.75%.
- Declare the variables car\_price, year and installment.
- Ask the user to enter the price of the car.
- Ask the user to enter the number of loan years.
- Use the formula given to calculate the monthly instalment amount.

$$\text{installment} = (\text{car\_price} + ((\text{car\_price} * \text{RATE}) * \text{years})) / (\text{years} * 12)$$

## SAMPLE OUTPUT

```
Car price : $ 30000
```

```
Years : 7
```

```
-----
```

```
Installment : $ 450.89
```

# string.h

- Read: <http://www.cplusplus.com/reference/cstring/>

```
#include<stdio.h>
#include<string.h>
int main()
{
    char name[20],uni[20];
    printf("Enter your name : ");
    gets(name);// assign entered value to name variable
    strcpy(uni, "Istanbul Technical University");
    printf("\nYour name is %s, your uni. is %s \n", name, uni);

    system("pause");
    return 0;
}
```

# Control Structure If/else (Ex1)

- Declare the variables name, height, weight, BMI and status.
- Ask the user to enter the user's weight and height.
- Calculate the BMI (BMI = weight / height<sup>2</sup>).
- Based on the table below, identify the status of the BMI.
- Display the information as shown below.

BMI	Status
Below 18.5	Underweight
18.5 - 24.9	Normal
25 - 29.9	Overweight
30.0 & Above	Obese

```
Enter your name : Serkan Turkeli
Enter your height in meters : 1.78
Enter your weight in kilogram : 75.2

Serkan Turkeli, your height is 1.78 meters and your weight is 75.20 kilograms.
Your BMI is 23.73, so that means you are Normal
```

# Control Structure If/else (Ex2)

- You are required to write a complete program in C for a sales company.
- Get the salesperson name, salary and units sold.
- Get the bonus percentage for sales as shown below based on the units sold.

Units Sold	Bonus
100 – 200	2%
201 – 300	4%
> 300	6%

- The bonus amount is the bonus percentage of the salary.
- Calculate the total salary for the salesperson.
- Display the name, salary, units sold, bonus percentage, bonus amount and nett salary on the browser.

```
Enter salesperson name : serkan
Enter staff salary : $ 4000
Enter units sold : 400

Salesperson Name : serkan
Salary : $ 4000.00
Units Sold : 400
Bonus (Percent) : 6.00 %
Bonus ($) : $ 240.00
-----
Nett Salary : $ 4240.00
-----
```

# Switch (Ex1)

- Ask the user to enter the day code.
- Based on the table below, use **switch..case** statement to identify the day
- Display the information as shown below.

Day Code	Day
1 or S	Sunday
2	Monday
W	Wednesday

```
Enter the code : W
```

```
Your have chosen Wednesday
```

# Switch (Ex2)

- Ask the user to enter two numbers, num1 and num2.
- Ask the user to enter choice 1 or choice 2.
- Use **switch..case** statement for the following:
  - If the user selects Choice 1:
    - Add the numbers.
  - If the user selects Choice 2:
    - Multiply the numbers.
- Display the information as shown below.

---

```
Enter the first number : 3
```

```
Enter the first number : 4
```

```
Enter choice 1[ADD] or 2[MULTIPLY] : 2
```

```
Result : 12
```

## For (Ex1)

- Write a program to find the sum of first  $n$  natural numbers where  $n$  is entered by user

```
Enter the value of n.  
5  
Sum=15Devam etmek için
```

# While (Ex1)

- Write a complete C program using while loop to compute total course fees for students.
- Prompt the user to enter their name (string), id no (string) and duration of study (integer).
- Suppose that the course fee is starting from 10.000 TL in the first year and increases 5% the following years.
- Calculate the annual fee and total course fees for the whole duration of study.
- Display all information as shown below.

```
Enter name : serkan turkeli
Enter id : 507072009
Enter duration of study [year] : 5

-----
T_RKELI UNIVERSITY
-----
Student name : serkan turkeli
Student id : 507072009
Duration of study : 5

Year      Course Fee
1         TL 10000.00
2         TL 10500.00
3         TL 11025.00
4         TL 11576.25
5         TL 12155.06

-----
Total Course Fees : TL 55256.31
-----
```

# While (Ex2)

- Write a complete C program using **do-while** and **for** loop statements.
- Ask the user to enter an integer number.
- Display the multiplication table for the number that has been entered by the user.
- Refer sample of output as shown below.

```
-----  
MULTIPLICATION TABLE  
-----  
Enter an integer number : 5  
  
Multiplication table for 5 is :-  
  
5 10 15 20 25 30 35 40 45 50  
  
Would you like to continue? [Y] for Yes,[N] for no : y  
  
Enter an integer number : 4  
  
Multiplication table for 4 is :-  
  
4 8 12 16 20 24 28 32 36 40  
  
Would you like to continue? [Y] for Yes,[N] for no :
```

# Function (Ex1)

- Create a program that capable to calculate payment for each fruits.
- • In main(), ask the user to enter their choice using the menu as shown below.
- • If user selects 1, call function Banana()
- • If user selects 2, call function Orange()
- • In function Banana():
- Ask user to enter weight of banana.
- Calculate the price. [1 kg of banana = 1.80 TL]
- Display the price for 1kg of banana and total price of all bananas.
- • In function Orange():
- Ask user to enter weight of orange.
- Calculate the price. [1 kg of orange = 2.60 TL]
- Display the price for 1kg of orange and total price of all oranges.

```
=====
FRUITS
=====
Code of Fruits:
 [1] Banana
 [2] Orange
=====
Enter your fruit's code : 1

Enter weight of Banana: 4

Price for 1kg of Banana : 1.80 TL
Total price for 4.00 kg of Banana : TL 7.200
```

- Write a C program that is capable to convert Turkish Lira to Singapore Dollar, Indonesia Rupee and Saudi Riyal.

## Function(Ex2)

- In main()
  - Ask user to enter an amount in Turkish Lira .
  - User will enter the selection according to the menu created as shown below.
  - If user selects '1', call Singapore(...) and send amount
  - If user selects '2', call Indonesia(...) and send amount
  - If user selects '3', call Saudi(...) and send amount
  - Display the result.
- In Singapore(...):
  - calculate the conversion value in dollar
  - return the result to main().
- In Indonesia(...):
  - calculate the conversion value in rupee
  - return the result to main().
- In Saudi(...):
  - calculate the conversion value in rupee
  - return the result to main().
- Formula of conversions are as follows:
  1. Singapore : 1 TL= 0.4382 dollar
  2. Indonesia : 1 TL = 2448.04 rupee
  3. Saudi : 1 TL = 1.0218 riyal
- The program only stops when user enters '0' as selection.

```
-----  
== MONEY EXCHANGE ==  
-----  
Enter amount in Turkish : TL 50  
  
Convert to:  
[1] Singapore Dollar  
[2] Saudi Riyal  
[3] Indonesia Rupee  
  
Enter your selection [enter '0' to exit] : 2  
Turkish Lira 50.00 is equals to 51.09 riyal.
```

- Wish you a Happy eid.  
(Mutlu bayramlar)
- Most of the questions are prepared by Naziffa Raha Binti Md Nasir ([metalab.uniten.edu.my/~naziffa](http://metalab.uniten.edu.my/~naziffa))

