

# BIL 101 – Introduction to Computer Science

## HW 8

Due to 02.12.2015, 17:00

Submit your hardcopies to Necmeddin ÇARKACI (122). Strictly no hardcopy will be accepted after 13:00

### PART 1 :

- Describe declarative, procedural, functional, and object oriented language briefly in your words.
- Find and write implementation of a problem's solution in both a declarative and a functional language. Describe how they solve the problem and their differences in operation.
- Draw an object oriented design which defines human who has property like eye color, height, weight, age etc. There are two types of human, man and woman. They has different preference of dressing and properties like man can be handsome and woman can be beautiful.
- Draw the parse tree for the expression

$x * y + x + z$

based on the syntax diagrams in the text book Figure 6.15.

- Draw the parse tree for the below expression

```
if ( W = 5 )
    then ( Z ← 7 )
    else( if ( W = 6 )
        then ( Y ← 7 )
        else ( if ( W = 7 )
            then ( X ← 7 )
            )
    )
)
```

### PART 2 :

Write a python code to convert an integer into a corresponding string using Morse alphabet which described below. (Hint: You can use dictionary data structure in python)

#### Numbers

•----	••----	•••----	••••-	•••••	-••••	--•••	---••	----•	-----
1	2	3	4	5	6	7	8	9	0