

# Lecture 17

Project & Activity



# QUIZ

قَالَ رَبِّ اشْرَحْ لِي صَدْرِي ۝  
﴿٢٥﴾

[فَالَّذِي نَسِيَ كَهُولَ دَسَّهُ مَنْ يَرَى لَيْسَ بِمَنْ يَرَى  
[فَالَّذِي نَسِيَ كَهُولَ دَسَّهُ مَنْ يَرَى لَيْسَ بِمَنْ يَرَى]

وَيَسِّرْ لِي آمْرِي ۝  
﴿٢٦﴾

[وَيَسِّرْ لِي آمْرِي : مَنْ يَرَى لَيْسَ بِمَنْ يَرَى]

وَاحْلُلْ عُقْدَةً مِنْ لِسَانِي ۝  
﴿٢٧﴾

[وَاحْلُلْ لِي آمْرِي : مَنْ يَرَى لَيْسَ بِمَنْ يَرَى]

يَفْقَهُوا قَوْلِي ۝  
﴿٢٨﴾

[يَفْقَهُوا قَوْلِي : مَنْ يَرَى لَيْسَ بِمَنْ يَرَى]

# 4 QUESTIONS / FEEDBACK / CONCERNS



INFORMATION  
TECHNOLOGY  
UNIVERSITY

# SE SECA SLIDE OF FAME

5



NO ONE  
WEEK - 1



Muhammad Daniyal  
Hammad (BSSE23046)  
WEEK - 2



Syed Hashim Abbas  
(BSSE23084)  
WEEK - 3



Umar Ahmad  
(BSSE23032)  
WEEK - 4



Umar Ahmad  
(BSSE23032)  
WEEK - 5



Fatima Noorulain  
BSSE23003  
WEEK - 6



Umar Ahmad  
(BSSE23032)  
WEEK - 7



YOUR NAME  
WEEK - 8



YOUR NAME  
WEEK - 9



YOUR NAME  
WEEK - 10



YOUR NAME  
WEEK - 11



YOUR NAME  
WEEK - 12



YOUR NAME  
WEEK - 13



YOUR NAME  
WEEK - 14



YOUR NAME  
WEEK - 15

# SE SEC B SLIDE OF FAME

6



Muhammad Mukarram  
BSSE23029  
WEEK - 1



Muhammad Abdullah  
(BSSE23087)  
WEEK - 2



Muhammad Abdullah  
(BSSE23087)  
WEEK - 3



Fasiha Rohail  
(BSSE23041)  
WEEK - 4



Muhammad Abdullah  
(BSSE23087)  
WEEK - 5



Hazira Azam  
BSSE23019  
WEEK - 6



Jamshaid Ahmed  
BSSE23012  
WEEK - 7



YOUR NAME  
WEEK - 8



YOUR NAME  
WEEK - 9



YOUR NAME  
WEEK - 10



YOUR NAME  
WEEK - 11



YOUR NAME  
WEEK - 12



YOUR NAME  
WEEK - 13



YOUR NAME  
WEEK - 14



YOUR NAME  
WEEK - 15

# RECAP

GitHub

Tools (Cygwin, IDE, GitHub)

Approach towards a word problem

Flowcharts

Flowcharts Advantages & Disadvantages

Algorithms

Pseudocode

Numbers Systems (Decimal, Binary, Octal & Hexadecimal)

Ten's Complement

Twos Complement

main function

Stream in and stream out operators

if else

Functions

Data Types

Arithmetic Operators

Relational Operators

Loops (While, for , do while)

Nested Loops

Switch cases

# RECAP

Function Overloading

Scope of variables

Function Prototype and Definition

Default Value in parameters of functions

Parameters by value vs Parameters by Reference

Recursion

Arrays

2D Arrays / Multi Dimensional Arrays

# Midterm Lab Exam Discussion

# ARRAY & POINTERS

```
// arrPtr.cpp
// Outputs addresses and values of array elements.
// -----
#include <iostream>
using namespace std;

int arr[4] = { 0, 10, 20, 30 };

int main()
{
    cout << "\nAddress and value of array elements:\n"
        << endl;

    for( int i = 0; i < 4; i++ )
        cout << "Address: " << (void*) (arr+i)      // &arr[i]
            << " Value: " << *(arr+i)           // arr[i]
            << endl;
}

return 0;
}
```