

Some Extra Slides

DBMS is a Package



Database Management System (DBMS)

- DBMS is a software package that enables user to create and maintain databases. It facilitates:
 - **Defining** a database that involves specifying the data types, structures, and constraints for the data to be stored in the database.
 - **Constructing** a database which is the process of storing the data.
 - **Manipulating** a database such as functions of querying and sharing the database objects, updating the database, and generating reports from the data.
- Database and DBMS software together constitute a database system.

Examples DBMS

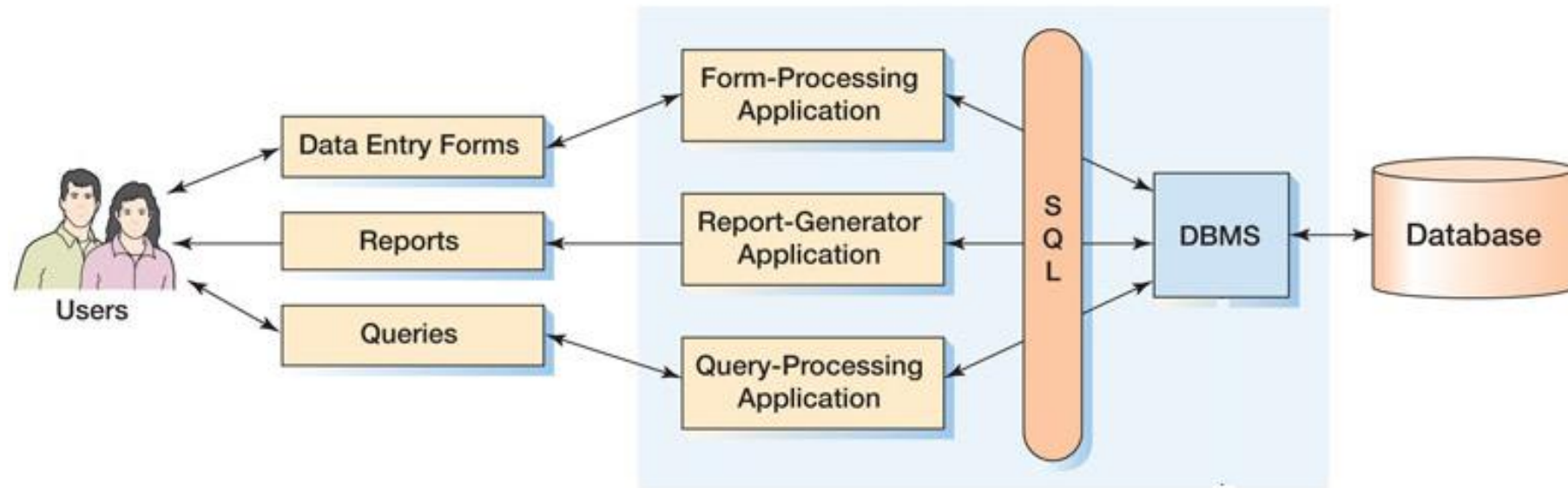
- Oracle
- IBM DB2
- Ingress
- Teradata
- MS SQL Server
- MySQL
- MS Access



Database Management System (DBMS) Features

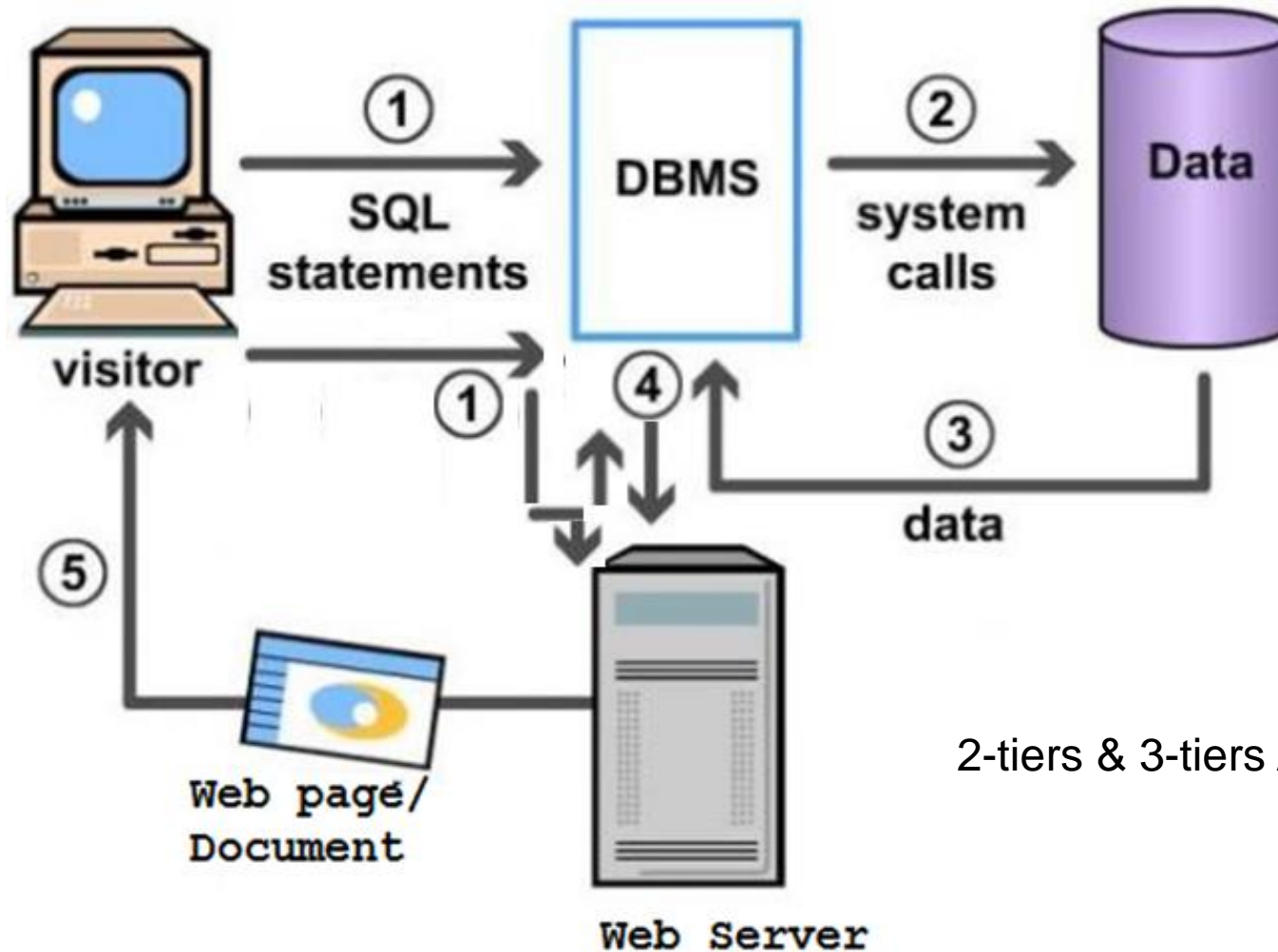
- A Software Package that enables users to define, create, maintain, and control access to the database.
 - Data Definition Language (DDL)
 - Data Manipulation Language (DML)
 - Control access:
 - Security, integrity, concurrent access, recovery, support for data communication, etc.
 - Utility services
 - File import/export, monitoring facilities, code generator, report writer, etc.
- Support Ad Hoc queries

DBMS Architecture



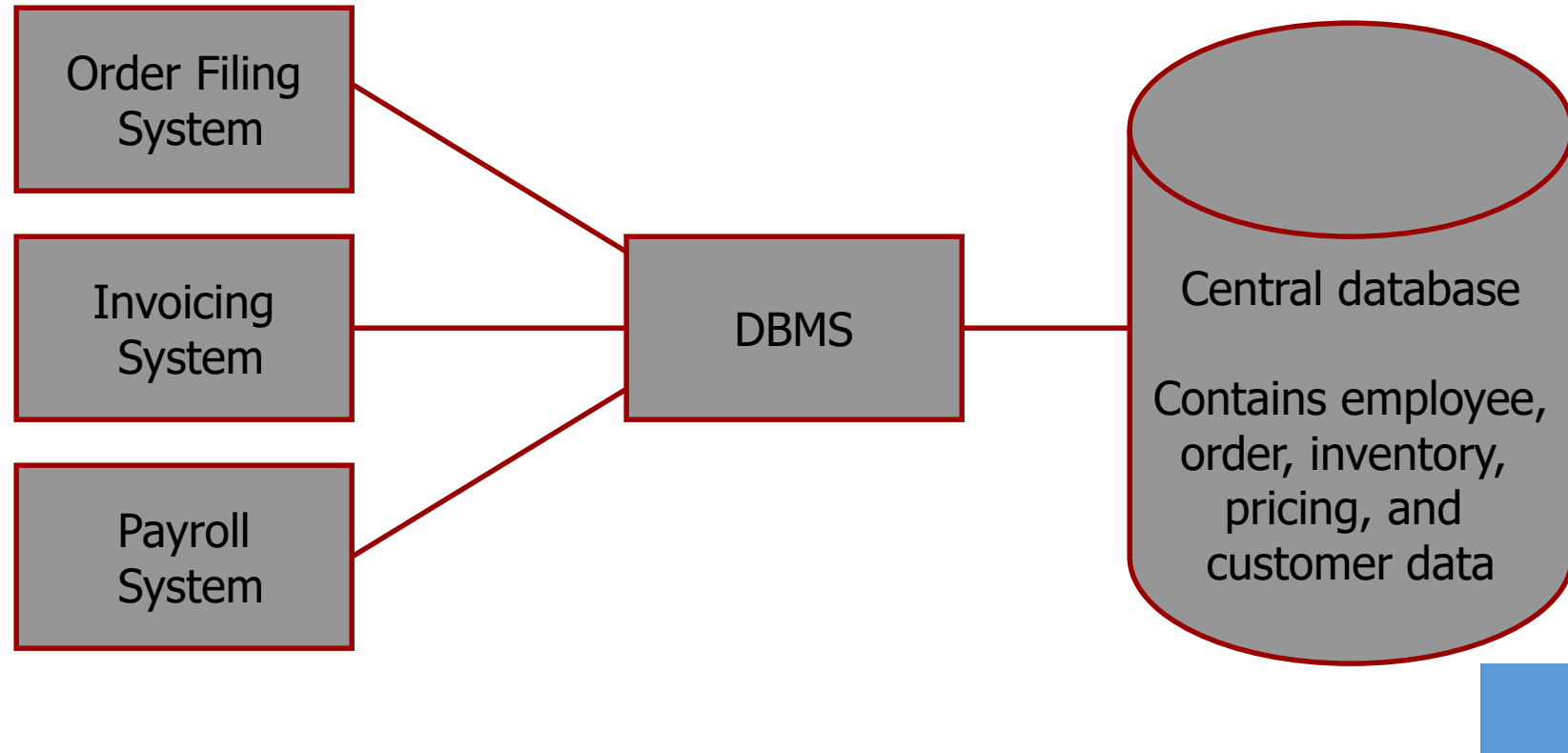
Form Processing & Report Processing Applications are built by using VB, DOT Net or PHP programming. Reports can be developed using Crystal Reports tool. Query Processing can be managed by using vendors SQL tool or 3rd party tools such as TOAD, SQL Developer

Data Accessing using DBMS



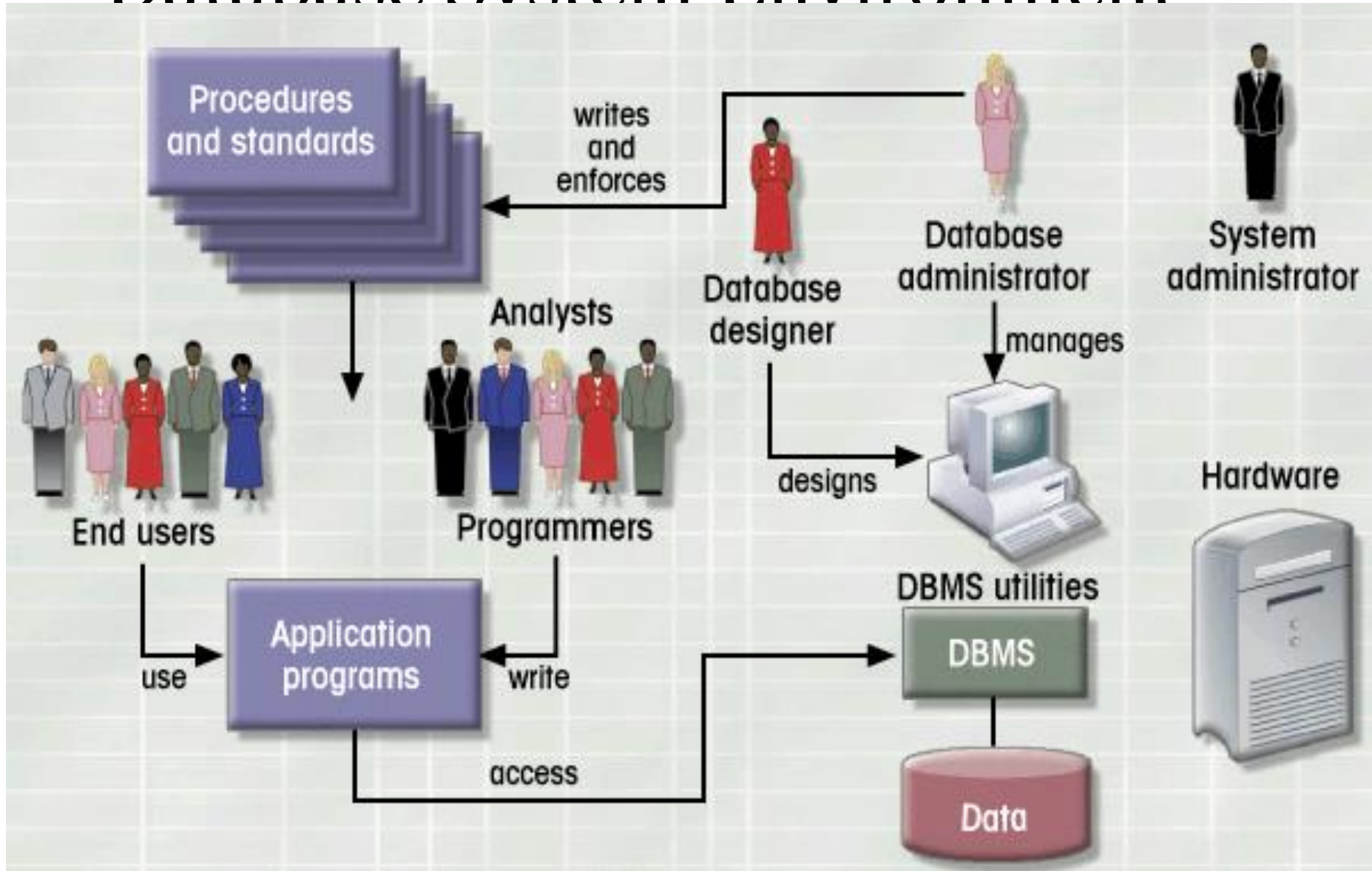
Database Management System

- A software system that is used to create, maintain, and provide controlled access to user databases



DBMS manages data resources like an operating system manages hardware resources

Database System Environment



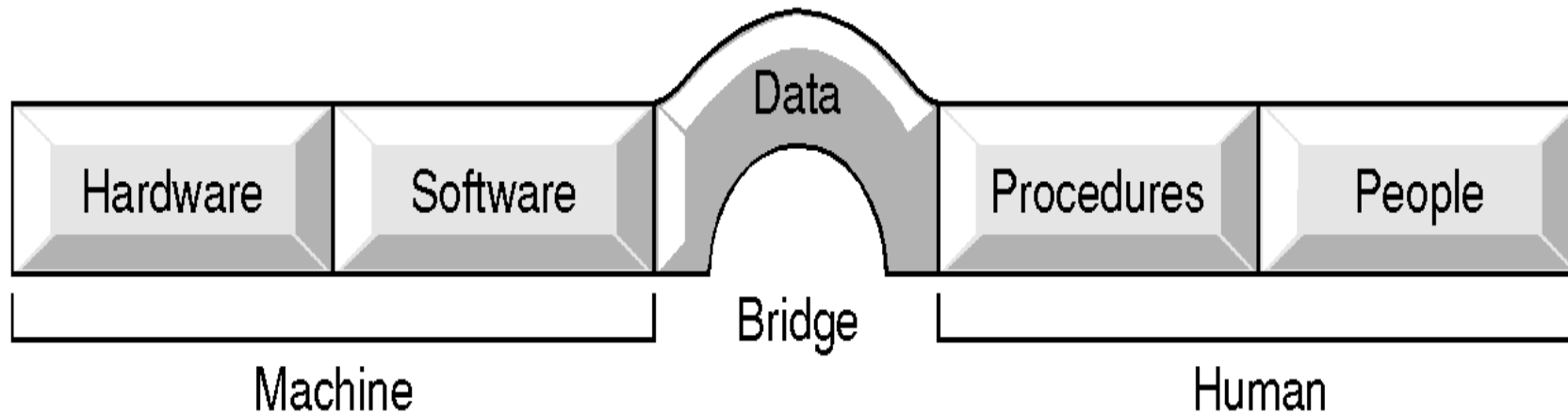
DBMS Benefits

- Minimal data redundancy
- Consistency of data
- Integration of data
- Sharing of data
- Ease of application development
- Uniform security, privacy and integrity controls
- Data accessibility and responsiveness
- Reduced program maintenance
- Data independence

DBMS related Applications

- SQL
- Forms/ Reports
- Web/ Portal
- GUI Client-Server (VB, C++, Java, Mobile)
- SAP/ OracleApps
- BI Applications (SAS, OracleWarehousing)
- Case Tools (Toad Modeler, Enterprise Architect, VISIO etc)

Components of DBMS Environment



Components of DBMS Environment

- Hardware
 - Can range from a PC to a network of computers
- Software
 - DBMS, operating system, network software (if necessary) and also the application programs
- Data
 - Used by the organization and a description of this data called schema

Components of DB Environment ...

- Procedures
 - Instructions and rules that should be applied to the design and use of the database and DBMS
- People

Database Professionals

- **Database implementers**
 - Build modules that go inside the DBMS
- **Database application developers**
 - Build application that run on top of the DBMS, and are used by end-users to interact with their data.
- **Database Administrators**
 - Create database schema
 - Maintain and tune the DBMS engine
 - Maintain and tune the data in the DBMS
 - Corporations need them

Roles/ Jobs in the Database Environment

- Data Administrator (DA)
- Database Administrator (DBA)
- Database Designers (Logical and Physical)
- Applications Programmer
- Database Developer
- Database Analyst
- End users (Naive and sophisticated)

Forms & Reports

The screenshot displays the NeON system interface. At the top, there is a navigation bar with icons for home, settings, help, and security, along with a search menu. Below this is a menu bar with options: Admissions, Plan Semester, Early Semester, Semester Operations, Finalize Semester, Admin, and Fee Management. The main content area shows the 'Withholding Tax Certificate' form. The form includes a header with the NeON logo and a welcome message. A sidebar on the left lists 'Frequently Used Pages' and 'FMS Operations'. The main form area contains a 'Certificate of Collection of Withholding Tax (Under Section 236-I)' for the year 2015-16. The certificate details the payment of Rs. 219,060 by Rizwan Alim Mufti (CNIC 61101-4365969-5) and a sum of Rs. 10,954 collected on account of Withholding Tax. The certificate is dated 28-Jun-2016 and has a certificate number I0387/2015-16. The collector is Muhammad Riaz Tahir, Director Accounts and Finance, BCCI - FAST, FAST House, Rohtas Road, G9/4, Islamabad, NTN 0453657-6. The BCCI Foundation for Advancement of Science & Technology, Islamabad is also mentioned.

Welcome: irshad.muhammad (User)

Search Menu...

Admissions Plan Semester Early Semester Semester Operations Finalize Semester Admin Fee Management

Fee Management > FMS Operations > Withholding Tax Certificate

Islembad Campus Multiple RollNos RollNo

Rollno: 150332 eg: 07-1234 Search RollNo

https://neon/Office/ReportLoader.aspx?type=whtaxcertNew& - Google Chrome

https://neon/Office/ReportLoader.aspx?type=whtaxcertNew&

Certificate of Collection of Withholding Tax

(Under Section 236-I)

28-Jun-2016
Certificate No. I0387/2015-16

During Tax year 2015-16, Rizwan Alim Mufti (CNIC 61101-4365969-5), resident of uzairr0007@gmail.com Islamabad paid Rs. 219,060 as fee for Uzair Rizwan Mufti , roll number 15I-0332.
In addition, a sum of Rs. 10,954 (Ten Thousand Nine Hundred Fifty-Four) was collected on account of Withholding Tax under Section 236-I.

Withholding Tax deposited in National Bank of Pakistan, G-9 MARKAZ BRANCH, ISLAMABAD on 31-May-2016 against CPR no. IT-20160531-1932-1247034.

Withholding Tax Collected by:
BCCI - FAST
FAST House, Rohtas Road,
G9/4, Islamabad
NTN 0453657-6

BCCI Foundation for
Advancement of Science &
Technology, Islamabad

Muhammad Riaz Tahir
Director Accounts and Finance

FMS Operations

- Calculate Fee
- Recieve Payment
- Fee Refund on Clearance
- Manage Installment
- Manage Misc. Fee and Fines
- Upload Scroll
- Fee Refund
- Verify and Post Challan
- Print Fee Receipts
- Sponsorship Collection
- Withholding Tax Certificate
- Collect Freeze Fee
- Reversal Entry
- Reset Installment
- Verify Bank Scroll
- Challan Details
- Generate Advance Fee Challan
- Adjustment

FMS Reports

FMS Reports

Evolution of Database Systems

