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GOVT. OF KHYBER PAKHTUNKHWA TRADE TESTING BOARD PESHAWAR
DIRECTORATE OF TECHNICAL EDUCATION & MANPOWER TRAINING
CAMPED AT GTVC GULBAHAR PESHAWAR



SCHEME OF STUDIES & EVALUATION PLAN FOR ONE YEAR DIPLOMA IN
INFORMATION TECHNOLOGY COURSE (2012)

PART-I

Sr. No	Subject	Theory Hours	Practical Hours	Theory Marks	Practical Marks	Total Marks
1	Information & Communication Technology (ICT)	40	40	100	50	150
2	Office Automation, (World / Excel /Power Point)	40	80	50	100	150
3	Computer Network	60	40	50	100	150
4	Operating System	40	80	50	100	150
5	Computer Programs C/C ++	40	40	50	50	100
Total		120	280	300	400	700

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PART-II

Sr. No	Subject	Theory Hours	Practical Hours	Theory Marks	Practical Marks	Total
1	Introduction to Data base	80	40	100	50	150
2	MS Access	40	80	50	100	150
3	E- Commerce & Web Technology	80	80	100	50	150
4	Graphic Design	40	80	100	50	150
5	Project				100	100
Total		240	280	350	350	700

Part-1/ First Semester

Diploma in information Technol

Information & Communication Technology (ICT)

(PAPER- 1)

Total Th Hrs 40
Total Th Mks 100Total Pr Hrs 40
Total Pr. Mks 50**OBJECTIVES.**

This course provides an overview of computing and computer science, including topics as the history of computers, computer application, and basic understanding various hardware components. Hands-on experience in installation and configuration included. Students learn how software interacts with and controls the computer hardware elements. Analytical logic and troubleshooting skills are emphasized. Basic networking concepts are introduced.

Course Contents.**1. Introduction to information technology**

(Information Technology, Data types of data, information, History of computing
Introduction to computer hardware and trouble shooting concepts

2. Introduction to computer**Hardware**

Introduction to the personal Computer, safe Lab procedures and Tool U
Computer Assemble Step-by-Step, Basics of preventive Maintenance
Troubleshooting. Fundamental Operating System, Fundamental Laptops and ports
Devices, Fundamental printers and Scanners.

Storage Devices

Main / primary memory (RAM, ROM)

Secondary / Auxiliary Storage Devices

(Hard Disk, CD-ROM, Magnetic tape, Magnetic drum), USB

Introduction of Microprocessor, Basic Architecture of microprocessor, and Introduction of different technologies of microprocessors

3. Software design and algorithm:

Software System Software Application Software. Flow Charts, concepts



Speculation on future computers and their uses, AI Neural network, Expert System, virus, Antivirus.

5. Fundamental Networks

Networks and its types, networks media, Topologies, network Devices

Books:

1. Introduction to computer By Peter Norton,
2. Introduction to computer By John R. Roos, Glencoe.
3. DIT-1 by Mohammad Khalid.
4. Introduction to I.T by Imran Syed.

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Part-1/ First Semester

Diploma in information Technology

OFFICE AUTOMATION .
(Version 2007 and onward)

(PAPER-I)

Total Th Hrs 40
Total Th Mks 50

Total Pr Hrs 80
Total Pr. Mks 100

A- WORD PROCESSING

Ms-Word, Word processing, Manual and electronic Word processing

1. **Screen Layouts**

Menus

Shortcut

Toolbars

Customization of Toolbars

Title Bar, Status Bar, Scroll

Bars and Rulers.

2. **Working with files**

Create, Open, Save, Rename and Close a document

Working on Multiple Documents.

Cut, Copy, Paste, Special Undo and Redo Operations

Find Replace and go to Commands

Text, Paragraph and Page Formatting

Header and Footer

Date and Time

Bullets and Numbering

Columns and Drop Caps

Tabs and Margins

Comments and Foot Notes

Insert a picture and its Formatting

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3. Document Printing

- Selection of a printer
- Printing Setting
- Print Preview
- Print and Page Setup
- Shortcut Keys

B- MS- EXCEL

- Basic Terminology of Ms- Excel
- Creating Opening Renaming Saving and Closing Workbook/ Spread Sheet
- Editing Functions: Undo, Redo. Fill, Auto Fill, Delete, Cut, Copy, Paste, Clear, Find and Replace
- Inserting: Header & Footer Cells Rows / Columns and Worksheet
- Working with Formulas: Entering Formula with the help of Formula Bar
- Entering Formula.
- Directly into the cells, sue of Arithmetic and Logical Formulas.
- Use of Built- in functions Time and Date Concatenation, Sum if, Nested Max, Min.
- Average, Count, Now, Month, Day, Year Upper, Lower, Left & Right.
- Tools and Date: Spell Check, Auto Correction, Workbook protection Data
- Sorting and filtering
- Formatting Cells and Text, Borders and Shading, Positioning Cells and Text, Auto Format,
- Categories, of numbers, Cell / Range Referencing, Alignment, Date & Time Working With Charts, Creating Editing and Formatting of various types of Charts
- Printing: Selecting Printer, Print selected areas page selection
- Sorter View.

C- POWER POINT

- 1. Define Power Point
- 2. PRESENTAION.

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- Power point presentation environment
- View icon of Power Point
- Start Power Point, Open a Presentation
- 3. Creating a new presentation using
- MS- Power point by
- Creating By Design Template
- Creating By Blank Presentation

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Formatting Tool Bar

7. Apply design Template
8. Set Background & Layout of Slides
9. Adding Pictures and Graphics in a slide
10. Apply Custom Animation
Apply present animation
11. Apply Action Setting
12. Adding Sound to an Animation
13. Add Sound and Music effects
to the presentation
14. Set view Options
 - Normal View
 - Outline View
 - Slide View
 - Sorter View
 - Notes Page View
 - Slide Show
 - Slides Show Off
 - Important Short cut

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Reference books / Helping Material

1. Business information technology-1 by Mohammad Khalid.
2. Microsoft Office by Danoja & June Jamrich Parsons.

Computer Networking .

(PAPER-I)

Total Th Hrs 60
Total Th Mks 50

Total Pr Hrs 40
Total Pr. Mks 100

OBJECTIVES

- Understanding the basic concept of computer networks.
- Understanding the different types of computer networks.
- Understanding the different types of communication.
- Configuring different network devices.
- Creating different network scenarios in a network simulator (packet tracer)

COURSE CONTENTS

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PART-I Basic Terminologies

Definition and History of Computer Network

Local Area Network (LAN)

Metropolitan Area Network (MAN)

Wide Area Network (WAN)

Basic Network Terminologies.

- Data
- Data rate
- Baud rate
- Peak data rate.
- Bursty data.



Peer-to-peer Network Vs Server basic Network

Networking Topologies

- Mesh, Bus, Star, Ring, Hybrid

Networking Devices

Transmission media

- Wired media
 - Coaxial cable (10 Base2 10 Base 5 10Base T, 100Base X)
 - Twisted pair cable
- Unshielded twisted- pair (Cat1, Cat 2, Cat 3, Cat 4, Cat 5, Cat 6,)
- Shielded twisted- pair
 - Fiber optic cable
- Wireless media
 - Reasons for wireless network
 - Wireless communication with LANs

Types of Connectors

- RJ45
- RJ11
- BNC

What is OSI Model?

- Application Layer
- Presentation Layer
- Session Layer
- Transport Layer
- Network Layer
- Data Link Layer
- Physical Layer

IP Addresses

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- IPv4
 - Class A, Class B, Class C, Class D, and Class E, IP addresses
 - Introduction to IPv6

Subnets

Routed protocols and Routing Protocols (Deification, Similarity, Differences and examples)

Practical Portion

Basic Commands for Troubleshooting

- Ping, ipconfig / all, ipconfig / renew, ipconfig / release, trace route,

Case Study:

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Installing network simulator (packet Tracer)

Creating simple network scenarios

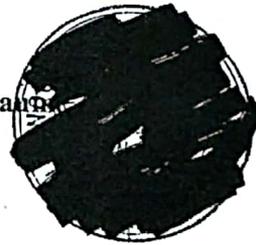
Configuring PC's with IP addresses subnet mask and gateway

Configuring switches by giving name to switches and management IP addresses

Connection PCs to switch and then ping each other' that they are working properly.

Reference Books / Helping Material

1. DIT -I by Mohammad Khalid
2. Networking Essential By Andrew Tanenbaum



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Part-1/ First Semester
Technology

Diploma in information

OPERATIONG SYSTEM.

(PAPER-I)

Total Th Hrs 40
Total Th Mks 50

Total Pr Hrs 80
Total Pr. Mks 100

OBJECTIVES

- Understanding Desktop Operating System and Server Operating System.
- Understanding the role of Operating System in computing environment.
- Hands on practice on Windows 7, Windows 2008 Server and Linux.
- Networking Features in Operating System.

COURSE CONTENTS

General

What is an Operating System and its role in the Computing environment?

Major parts of Operating System.

Classification of Operating System.

- Desktop Vs Server base Operating System.

Windows 7

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- Installing Windows 7
- Configure disks, Partitions, volumes, and device drivers.
- Configure file access and printers on a Windows 7 client computer.
- Configure network connectivity on a windows 7 client computer.
- Configure wireless network connectivity on a windows 7 client computer.
(Bluetooth, Wi Fi)
- Secure Windows 7 client desktop computers.
- Optimize and maintain the performance and reliability of a windows 7 client computer
- Remote access setting for a windows 7 client computer.

Windows Server

- Installing Windows Server 2008

Introduction to Administrative Tasks in Windows Server 2008 Environment

- Managing Server Roles and Features.
- Overview of Action Directory.

- Creating Computer Accounts.

Creating Groups and Organizational Units

- Introduction to Groups .
- ✓ Managing Groups .
- ✓ Creating Organizational Units.

Creating and Configuring Groups Policy

- Overview of Groups Policy.
- Configuring the Scope of Groups policy Objects.
- Managing Groups policy Objects.
- Delegating Administrative Control of Group Policy.
- Configuring Group policy setting.
- ✓ Configuring Security Policies.
- ✓ Configuring an Audit Policy.



DNS

- Installing and Configuring the DNS Server Role.
- Managing and Troubleshooting DNS.

Managing Windows Server 2008 Backup and Restore

- Backups with windows Server 2008.
- Planning Backups Policy on Windows Server 2008.
- Planning a Server Restore Policy.

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Linux

- Installing Linux (Red Hat).
- File System Management.
- Creating user accounts
- Installing application software's in Linux.
- Configuring device drivers.
- ✓ Executing basic commands in Terminal .



Reference Books / Helping Material

Computer Programming C / C ++

(PAPER- 1)

Total Th Hrs 40
Total Th Mks 50

Total Pr Hrs 40
Total Pr. Mks 50

Objective

Hundreds of computer languages are in use today, C/C ++ is one of them. It is one of the most powerful, general purpose high level programming language. It is a versatile language. This language can be used for almost any programming task. The purpose of including this subject in DIT course is to enable the students to develop application programs in various fields such as business, education, accounting, database management etc.

Chapter No. 1

WHAT IS C / C ++ ?

Objective

The purpose of this chapter is to discuss the C/C ++ language, its advantages and its brief history.

- What is C?
- Advantages of C language.
- C' s Weaknesses
- History of C.
- Difference between C & C ++



Chapter No.2

BASIC ELEMENTS OF C/C ++ PROGRAM

Objective:

The purpose of this chapter is to equip the students with different elements of C/C ++ that are required to write a complete C/C ++ program.

- C/C ++ Character Set.
- C/C ++ Reserved Words.
- User- defined Words.
- Variables
 - Naming Variables
 - Variable Types
- Constants.
 - Numeric Constants
 - Integer Constants
 - Floating Point Constants.
 - Exponential Real Constants.
 - Non-Numeric Constants.

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- * C/C ++ Statements.

Chapter No.3

STRUCTURE OF C/C ++ PROGRAM

Objective

C/C ++ statement are usually composed of keywords, which are used in conjunction with the basic element of the language like constants, variables and expression. The purpose of this chapter is to discuss the structure of a C/C ++ program as well as those statements, which appear in almost every C/C++ program.

- * Structure of C/C ++ program
- * C/C ++ comments.
- * C/C++ libraries
- * C/C ++ Data types.
- * The size of operator
- * Declaring Variables & Constants.
- * Assignment & Multiple Assignment operator.
- * How to assign String data?
- * Priority of Operations
- * Types Casting Operator.
- * Increment (++) & Decrement (--) operators.
- * Compound assignment operators

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Chapter No. 4

OUTPUT STATEMENTS

Objective:

There are several C/C++ functions to indicate different types of actions to be performed during executions. Output functions are one of them. This chapter will discuss those functions, which appear in almost every C/C ++ program.

- * The printf () function.
- * The clrser () function.
- * The cout, output stream.
- * The putch () & putchar () Character output Function.
- * The puts () String output Function.

Chapter No. 5

INPUT STATEMENTS.

Objective

Data may be accepted for variables at the time of program's execution. For this purpose, different input statements are used, which will be discussed in this chapter

- * The scanf () function
- * The gets () function.

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Chapter No. 6 MAKING DECISIONS.

Objective

In this chapter, students will learn how to make decisions in C/C++. They learn how to code the program, so that the computer tests a condition and selects one of two alternative actions depending on whether the condition is true or false.

- * Transfer of Control Process.
- * The if, if- else and nested if statements.
- * Relational operators.
- * Conditional Operators.
- * Multiple Choice statements (switch / case / break / default).

Chapter No.7 looping

Objective

The counter & looping are two main features of computer programming. After this chapter, students will be able to know, how to construct or design a program with looping structure.

- * Counters.
 - Standard Counter.
 - Accumulator Counter.
 - Multiplicative Counter.
- * Looping in C/C ++
- * The for & nested- for statement
- * The while loop.
- * The do while loop.
- * The break, continue and exit () statements.
- * Preprocessor Directive.

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Chapter No. 8 STANDARD LIBRARY FUNCTION

Objective

Library functions make programming much simpler in many situations and save the programming effort. This chapter equip the student with the most important the most widely used library functions.

- Trigonometric Functions
Sin () , cos () , tan () etc.
- Arithmetic Functions.
Abs () , sqrt () , log () , exp () , ceil () . floor () pow () pow 10 () , random () , rand () , etc.
- String Functions.
Strlen () strlenr () ,strupr () ,strrev () ,strncpy () , \$trecat () , strncat () , etc.

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- (ii) 1:M
- (iii) M:M

3. Normalization

- (a) Anomalies
- (b) Function Dependency
- (c) First Normal Form
- (d) Second Normal Form
- (e) Third Normal Form

4. SQL (Using MS SQL Server / Oracle/ My SQL)

(a) DDL (Data Definition Language)

- (i) CREATE Statement
- (ii) ALTER Statement
- (iii) DROP Statement
- (iv) RENAME Statement
- (v) TRUNCATE Statement

(b) DML (Data Manipulation Language)

- (i) INSERT Statement
- (ii) UPDATE Statement
- (iii) DELETE Statement

(c) DCL (Data Control Language)

- (i) COMMIT Statement
- (ii) ROLLBACK Statement

(d) Data retrieval

- (iv) SELECT Statement
- (v) WHERE Clause
- (vi) GROUP BY
- (vii) ORDER BY
- (viii) HAVING Clause

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(e) Function Constraint

- (xii) UNIQUE Constraint
- (xiii) Primary Key Constraint
- (xiv) Foreign Key Constraint
- (xv) Check Constraint

(f) Function

(a) Character Function

- (i) UPPER
- (ii) LOWER
- (iii) INITCAP
- (iv) CONCAT
- (v) SUBSTR
- (vi) INSTR
- (vii) LENGTH
- (viii) LPAID
- (ix) RPAID
- (x) LTRIM
- (xi) RTRIM

(a) Numeric Function

- (xvi) ROUND
- (xvii) TRUNC
- (xviii) MOD
- (xix) COALESCE

(b) Group Function

- (xx) Min
- (xxi) Max
- (xxii) AVG
- (xxiii) SUM
- (xxiv) COUNT

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(c) Conversion Function

- (xxv) TO-CHAR
- (xxvi) TO-NUMBER

(xxix) Importance of view in multi user environment.

(e) UNDERSTANDING/ Managing User Privileges and Roles

- (i) Introduction to Multi user environment
- (ii) Definition of Role and privileges
- (xii) CREATE USER
- (xiii) CREATE ROLE
- (xiv) DROP USER
- (xv) GRANT PRIVILEGE (DBA,ALL,SELECT, UPDATE, DELETE, INSERT)
- (xvi) Revoking User Privileges and Roles.

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Reference Books / Helping Material

1. Oracle DBA by Mohammad Khalid
2. Modern Data base System by Thomas Caroli
3. Data Base System By Raymond.
4. Introduction to Data Base By Imran Syed

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MS. Access
(Version 2007 and onward)

(PAPER-I1)

Total Th Hrs 40
Total Th Mks 50

Total Pr Hrs 80
Total Pr. Mks 100

1. DATABASE CONCEPTS

What is data and Database?

- 1.1 Why use Electronic Database?
- 1.2 Tables and Relationships
- 1.3 One to One
- 1.4 One to Many
- 1.5 Many to many

1.3 Database Features

1.3.1 Attributes, Character Fielded

Record, Tuples Field

1.3.2 Key, Primary Key

Foreign Key, Composite Key

1.3.3 Referential Integrity

1.3.4 Use of Wild Cards

1.4 MS- Access (Database)

Ms-Access Use Access, Window

Title Bar, Control Menu, Toolbar

Status Bar

Database Window

Object button

Data types

Start Access

Creating table, Table view

1.4.1 Create Table using in

Design View

Setting Primary Key, Saving table

Close, exit add, delete record filed

Resizing row column

Freezing Hiding Column, Finding Data

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1.4.3 Create Queries, define query, use adv

Types of query

Creating simple query

Executing data

Join, Difference between relations and join

Extracting data

Use of query wizard

1.4.4 Create Forms, What is form

Types of form

Create form by wizard

Create form of Design View

Add new record through form

Edit record through form

Editing option

List Box, Combo Box

Adding list Box and Combo Box

Cheek Box and option button

Command Button

1.4.5 Create Reports

What is report?

Use of Report, Standard types report

Auto report

Saving and closing auto report

Create single table report

Create two table report

Create Report in design view

Print a report

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1.4.6 Database Security

Reference Books / Helping Material.

1. Business Information Technology –II by Mohammad Khalid.
2. Modern Data Base System By Thomas Canolli

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E-Commerce & Web Technology.

(PAPER-I1)

Total Th Hrs 80
Total Th Mks 100

Total Pr Hrs 80
Total Pr. Mks 50

OBJECTIVE

This course provides complete knowledge of E-commerce with an intensive survey of Technologies used to support all aspects of electronic Commerce & E-business requirements. This course provides a complete training of Dream viewer tool that Provides a platform to implement these practices and enables students to make a complete website that will help the students to move in a marked confidently.

Course Contents:

• *Introduction to E-Commerce.*

- The difference between e-commerce and e-business
- Unique features of e-commerce technology
- Types of e-commerce.
- Element of a business model
- Business- to consumer (B2C) business models
- Business-to- business (B2B) business models

• *Introduction to web Technologies*

- Fundamental of internet and www concepts.
- Protocols (HTTP,FTP, IP,TCP,)
- Domain Names (com, edu, org, net, mil, sip)

HTML

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Introduction to HTML

- Introduction
- A Text Editor
- A Web Browser

Creating First HTML Document

Html Tag Head Tag Title tag, Body Tag, Heading Paragraph Tag, Line Break Tag,

Graphics in web page

Image source Tag, Linking to local Files, to section of a page, Blink Tag, Marquee Tag,

Address Fasters and Email Link

Address Tag, Email Tag, Address and Email Link

Sniffing up text

Font Color Font Face Superscripts Subscripts Center Tag, Tables

Mata Tags and Frames

Mata Tag, Mate Refresh Tag, Meta Descriptor Tag, Frames Target Attribute No Frames Tag

Forms

Adding Forms to Web Pages Form Tag Menu Select, Text Input Element Password input. Element text Area Input Element Radio Buttons Checks, Boxes Submit & Reset Button.

Introduction to DHTML

- Introduction to java script, form Validation, Basic, Languages Structure.
- Introduction to CSS 1 & CSS2.
- Introduction to XHTML.

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Dream Weaver

1. Introduction.
2. Creating Web Project.
3. Applying Html on Dream Waver.
4. CSS and its Implementation on Dream waver.
5. Creating Menus.
6. Layouts.
7. Slicing.
8. Forms.
9. Tables.
10. Website Project.

Reference Book

- 1) Complete Reference

Web Reference

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- 1) WWW.W3schools. Com

Reference Books / Helping Material

1. E-Commerce by Mohammad Khalid.
2. E-Commerce for Managers by HOP Cook I V.

Graphic Design.

(PAPER-II)

Total Th Hrs 40
Total Th Mks 100

Total Pr Hrs 80
Total Pr. Mks 50

Photoshop CS version

Exploring the Photoshop Environment

- Explore the Photoshop interface
- Customize the Workspace
- Explore the Navigation Tools

Working with Image Areas

- Select Image Areas
- Save a Selection
- Modify a Selection

Setting Color Space

- Calibrate and Profile your Monitor
- Set a Working Color Space in Photoshop
- Convert Image from one Color Space to Another
- Manage Printing and Color



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Enhancing Image

- Print Strokes on an Image
- Apply Filter Effects
- Convert an Image to Black and White
- Blend Layers
- Merge Layers and Flatten Image
- Convert Color Images to Grayscale

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Working with Layers

- Create Layers
- Create Type Layers

Overview of Course Covered**In Page Course Outline**

Toggle English / Urdu

Tools

Ribbon

Status Bar

Rulers

Document Area

Scroll Bars

Cursors

Text Box

Title Text Box

Picture Box

Graphic Box

Line

Guides

Text Chain

Master Page

Entering Text

Character Attributes

Paragraph Attributes

Hyphenation

Borders

Style sheets

Text Wrap and Repel

Inserting Page Number

Inserting Inline Pictures

Inserting Tables

Importing unformatted and preformatted Text

Exporting Text

Find / Replace

Reference books / Helping Materials

1. Design Photoshop by Saeed H. Khawar.
2. Coral Draw by Mohammad Khalid.

10.7

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