SOFTWARE DEVELOPMENT COURSE ◁ OUTLINE

Duration 3-4 Months

alfa SOLUTIONS

www.alfasolutions.services

LEARN WITH ALFA

- 👉SEO (OPTIMIZATION)
- 👉DIGITAL MARKETING
- 👉GRAPHIC DESIGNING
- 👉WEB DEVELOPMENT
- 👉APPLICATION DEVELOPMENT
- 👉SOFTWARE DEVELOPEMENT
- 👉OFFICE MANAGMENT
- 👉FREELANCING
- 👉CONTENT WRITTING

ABOUT COMPANY

Alfa Solutions is one of the top companies based in Faisalabad, Pakistan, Providing Website Design & Development, SEO Services, Graphics Designing & Digital Marketing Services from last 5 Year in the market.

At **Alfa Solutions**, we are excited to announce new internship opportunity & short courses aimed at empowering youth as a leader in the industry.

We understand the importance of equipping the next generation with the skills and knowledge needed to thrive in the digital world. Our courses are designed to provide hands-on training in various aspects of digital marketing, from SEO and social media management to content creation and analytics, web development.

Join us and take the first step towards a successful career in digital marketing!

FEATURES OF COURSES

- **Trending Skill Development**
- **Update Courses**
- **Hands- On Experience**
- **24/7 Support**
- **Internship & Job Opportunity**
- **Earning Opportunities**
- **Freelance opportunity**

WHY YOU CHOOSE
ALFA SOLUTIONS !

- Expert Trainers
- Career Growth
- Practical Learning
- Internships & Job
- Online and On site sessions
- Project based Earning options
- Industry oriented projects

WHATS BEST FOR YOU !

1. SEO
SEO course provides in-depth knowledge of search engine optimization techniques. Learn how to optimize websites, conduct keyword research, and improve search rankings to drive organic traffic.

2. WEBSITE DEVELOPMENT
The process of creating and maintaining websites, involving web design, web content development, client-side/server-side scripting, and network security configuration.

3. DIGITAL MARKETING
The use of digital channels, such as social media, search engines, email, and websites, to promote products or services and engage with customers.

4. GRAPHIC DESIGNING
Graphic Designing course! Learn Canva, Adobe Photoshop, Adobe Illustrator, and the basics of Canva Video Editor, Filmora, and CapCut. Perfect for building your design and video editing skills!

5. APPLICATION DEVELOPMENT
Application Development course equips you with the skills to build mobile and web applications. Learn the fundamentals of coding, user interface design, and app deployment to create functional and user-friendly apps for various platforms.

6. SOFTWARE DEVELOPMENT
Software Development course covers coding, software design, and development practices. Learn to build efficient, scalable software solutions using modern programming languages and development frameworks.

7. OFFICE MANAGMENT
Office Management course focuses on mastering Microsoft Office tools like Word, Excel, and PowerPoint. Learn essential skills for creating documents, managing data, and delivering presentations, preparing you for any administrative or office role.

8. CONTENT WRITING
Content Writing course teaches the fundamentals of writing engaging, SEO-friendly content for websites, blogs, and social media. Learn how to craft compelling copy, optimize it for search engines, and build a portfolio that showcases your writing skills.

9. FREELANCING
Freelancing course teaches you how to succeed as an independent professional. Learn how to find clients, build a strong portfolio, and manage projects on popular platforms, along with direct client-hunting strategies.

10. ENGLISH LANGUAGE
English Language course enhances your speaking, writing, reading, and listening skills through interactive lessons. Perfect for beginners and anyone looking to improve their communication abilities!

SOFTWARE DEVELOPMENT

RELATIONAL DATA BASES & DATA MODELS

- ABOUT DATA MODELS
- ABOUT THE RELATIONAL MODEL
- THE ELECTRONIC DATA MODEL
- ABOUT THE RELATIONAL DBMS

SELECTION & SETUP OF THE DATABASE INTERFACE

- CONSIDERING AVAILABLE TOOLS
- SELECTING THE APPROPRIATE TOOL
- ORACLE NET DATABASE CONNECTIONS
- ORACLE PAAS DATABASE CONNECTIONS
- SETUP SQL DEVELOPER
- SETUP SQL*PLUS
- SETUP JDEVELOPER

USING THE DATA BASE INTERFACE

- ABOUT BIND & SUBSTITUTION VARIABLES
- USING SQL DEVELOPER
- USING SQL*PLUS

INTRODUCTION TO THE SQL LANGUAGE

- ABOUT THE SQL LANGUAGE
- CHARACTERISTICS OF SQL
- INTRODUCING SQL USING SELECT
- SQL RULES

THE SELECT STATEMENT

- THE SELECT STATEMENT
- DISTINCT / UNIQUE KEYWORD
- USING ALIAS NAMES

RESTRICTING RESULTS WITH THE WHERE CLAUSE

- ABOUT LOGICAL OPERATORS
- EQUALITY OPERATOR
- BOOLEAN OPERATORS
- REGEXP_LIKE( )
- IN OPERATOR

SOFTWARE DEVELOPMENT

SORTING DATA WITH THE ORDER BY CLAUSE

- ABOUT THE ORDER BY CLAUSE
- MULTIPLE COLUMN SORTS
- SPECIFY THE SORT SEQUENCE
- ABOUT NULL VALUES WITHIN SORTS
- USING COLUMN ALIASES

PSEUDO COLUMNS, FUNCTIONS & TOP-N QUERIES

- ROWID PSEUDO COLUMN
- ORA_ROWSCN PSEUDO COLUMN
- ROWNUM PSEUDO COLUMN
- ABOUT THE BUILT-IN FUNCTIONS
- SYSDATE, USER & UID
- SESSIONTIMEZONE FUNCTION
- USING THE DUAL TABLE
- ROW LIMITING & TOP-N QUERIES
- OFFSET X ROWS CLAUSE
- FETCH FIRST X ROWS ONLY CLAUSE
- THE WITH TIES OPTION

JOINING TABLES

- ABOUT JOINS
- INNER JOIN
- REFLEXIVE JOIN
- NON-KEY JOIN
- OUTER JOIN

USING THE SET OPERATORS

- ABOUT THE SET OPERATORS
- SQL SET OPERATOR EXAMPLES
- UNION EXAMPLE
- INTERSECT EXAMPLE
- MINUS EXAMPLE
- UNION ALL

SUMMARY FUNCTIONS

- USING SUB-QUERIES
- FINDING DATA WITH SUB-QUERIES
- STANDARD SUB-QUERIES
- CORRELATED SUB-QUERIES
- THE EXISTS OPERATOR

AGGREGATING DATA WITHIN GROUPS

- ABOUT SUMMARY GROUPS
- FIND GROUPS WITHIN THE TABLES
- SELECT DATA FROM THE BASE TABLES
- SELECT GROUPS FROM THE RESULTS

SOFTWARE DEVELOPMENT

USE DDL TO CREATE & MANAGE TABLES

- CREATE TABLE STATEMENT
- COLUMN DATA TYPES
- NOT NULL, DEFAULT, DESCRIBE
- ALTER TABLE STATEMENT
- DROP TABLE STATEMENT
- TABLE DDL USING SQL DEVELOPER
- ALTER USER STATEMENT
- ALTER SESSION STATEMENT
- NLS_LANGUAGE, NLS_DATE

USE DML TO MANIPULATE DATA

- THE INSERT STATEMENT
- THE DELETE STATEMENT
- THE UPDATE STATEMENT
- ABOUT TRANSACTIONS
- TRANSACTION ROLLBACK
- TRANSACTION COMMIT
- TRANSACTION SAVEPOINT
- THE SET TRANSACTION STATEMENT
- SET TRANSACTION READ ONLY STATEMENT RULES

UNDERSTANDING THE DATA MODELS

- THE COMPANY DATA MODEL
- THE ELECTRONICS DATA MODEL

ABOUT THE SQL-99 STANDARD

- SQL-92 & SQL-99
- CROSS JOINS
- NATURAL JOINS
- INNER JOINS
- IMPLICIT INNER JOIN
- OUTER JOINS
- ANTI JOINS
- NAMED SUB-QUERIES

ENHANCING GROUPS WITH ROLLUP & CUBE

- USING ROLLUP
- THE GROUPING() FUNCTION
- USING CUBE

USING THE CASE EXPRESSION

- WHAT ARE THE SQL FUNCTIONS?
- STRING FORMATTING FUNCTIONS
- UPPER(), LOWER() EXAMPLE
- INITCAP() EXAMPLE
- CHARACTER CODES FUNCTIONS
- CHR(), ASCII() EXAMPLES
- PAD & TRIM FUNCTIONS
- RPAD() EXAMPLE
- RTRIM() EXAMPLE
- TRIM() EXAMPLE
- STRING MANIPULATION FUNCTIONS
- DECODE() EXAMPLE
- SUBSTR() EXAMPLE

SOFTWARE DEVELOPMENT

- INSTR() EXAMPLE
- TRANSLATE() EXAMPLE
- REPLACE() EXAMPLE
- STRING COMPARISON FUNCTIONS
- LEAST() EXAMPLE
- PHONETIC SEARCH FUNCTION
- SOUNDEX() EXAMPLE

SQL FUNCTIONS:
NUMERIC HANDLING

- ABOUT THE NUMERIC DATA FUNCTIONS
- GREATEST() EXAMPLE
- ABS() EXAMPLE
- ROUND() EXAMPLE
- TRUNC() EXAMPLE
- SIGN() EXAMPLE
- TO_NUMBER() EXAMPLE & DATA TYPE CONVERSIONS
- NULL VALUES FUNCTIONS
- NVL() & NVL2() FUNCTION
- NVL() EXAMPLE (CHARACTER)

- NVL() EXAMPLE (NUMERIC LOSS OF DATA)
- NVL() EXAMPLE (NUMERIC OUTPUT)
- NVL2() EXAMPLE
- COALESCE() FUNCTION
- NULLIF() FUNCTION

SQL FUNCTIONS:
DATE HANDLING

- DATE FORMATTING FUNCTIONS
- TO_CHAR() & TO_DATE() FORMAT PATTERNS
- TO_CHAR() EXAMPLES
- TO_DATE() EXAMPLES
- EXTRACT() EXAMPLE
- DATE ARITHMETIC FUNCTIONS
- MONTHS_BETWEEN() EXAMPLE
- ADD_MONTHS() EXAMPLE
- LAST_DAY() EXAMPLE

- NEXT_DAY() EXAMPLE
- TRUNC(), ROUND() DATES EXAMPLE
- NEW_TIME() EXAMPLE
- ABOUT V$TIMEZONE_NAMES
- CAST() FUNCTION & TIME ZONES

DATABASE OBJECTS:
ABOUT DATABASE OBJECTS

- ABOUT DATABASE OBJECTS
- ABOUT SCHEMAS
- MAKING OBJECT REFERENCES

SOFTWARE DEVELOPMENT

DATABASE OBJECTS:
RELATIONAL VIEWS

- ABOUT RELATIONAL VIEWS
- THE CREATE VIEW STATEMENT
- WHY USE VIEWS?
- ACCESSING VIEWS WITH DML
- MAINTAINING VIEW DEFINITIONS
- ALTER VIEW
- DROP VIEW
- DDL USING SQL DEVELOPER

DATABASE OBJECTS:
INDEXES

- ABOUT INDEXES
- CREATE & DROP INDEX STATEMENTS
- INDEXES & PERFORMANCE
- DATA DICTIONARY STORAGE

DATABASE OBJECTS:
CREATING OTHER OBJECTS

- ABOUT SEQUENCES
- REFERENCING NEXTVAL
- REFERENCING CURRVAL
- WITHIN THE DEFAULT CLAUSE
- ALTER SEQUENCE & DROP SEQUENCE
- ALTER SEQUENCE
- DROP SEQUENCE
- ABOUT IDENTITY COLUMNS
- CREATE TABLE … GENERATED AS IDENTITY
- ALTER TABLE … GENERATED AS IDENTITY
- START WITH LIMIT VALUE
- ALTER TABLE … DROP IDENTITY
- ABOUT SYNONYMS
- CREATE & DROP SYNONYM STATEMENTS
- CREATE SYNONYM
- DROP SYNONYM
- PUBLIC VS. PRIVATE SYNONYMS
- CREATE SCHEMA AUTHORIZATION

DATABASE OBJECTS:
OBJECT MANAGEMENT
USING DDL

- THE RENAME STATEMENT
- TABLESPACE PLACEMENT
- CREATE TABLE … TABLESPACE
- THE COMMENT STATEMENT
- THE TRUNCATE TABLE STATEMENT

DATABASE OBJECTS:
SECURITY

- ABOUT OBJECT SECURITY
- GRANT OBJECT PRIVILEGES
- REVOKE OBJECT PRIVILEGES
- OBJECT PRIVILEGES & SQL DEVELOPER

DATA INTEGRITY USING CONSTRAINTS

- ABOUT CONSTRAINTS
- NOT NULL CONSTRAINT
- NOT NULL EXAMPLE
- CHECK CONSTRAINT
- UNIQUE CONSTRAINT
- PRIMARY KEY CONSTRAINT
- REFERENCES CONSTRAINT
- ON DELETE CASCADE EXAMPLE
- ON DELETE SET NULL EXAMPLE
- CONSTRAINTS ON EXISTING TABLES

THANK YOU!

for choosing this Course. This final assessment aims to evaluate your understanding and application for this course. You will showcase your knowledge through it. Upon successful completion, you will receive a course completion certificate from Alfa Solutions. Validating your proficiency in software development. Embrace this achievement as you embark on your journey to excel in the dynamic field of software development.

BEST REGARDS