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23 December 2024	23 December 2024
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17 January 2025

17 January 2025

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18 January 2025

22 January 2025

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23 January 2025

27 January 2025

TBD

TBD

28 January 2025

29 January 2025

TBD

TBD

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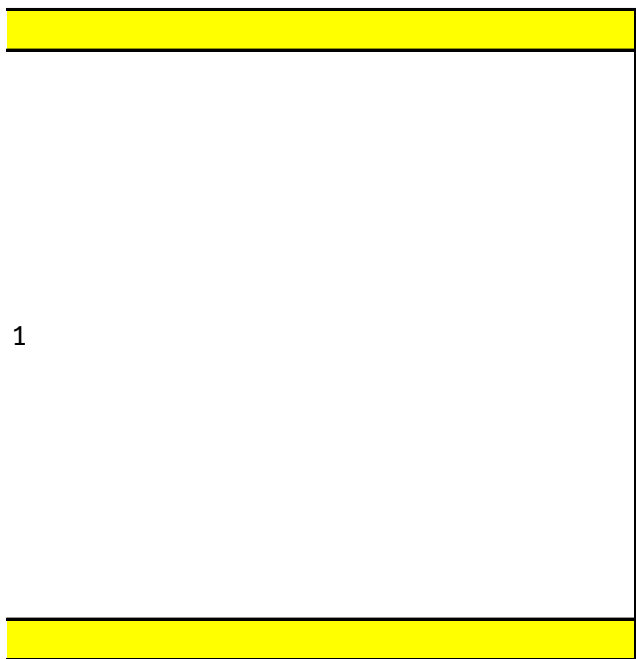


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Topics
<p>Day-1: Introduction AS/400</p> <p>Introduction to AS400, Concept of Client Server Technology, History of AS400, AS400 usage and industries served, Different AS400 versions, Latest tools introduced for AS400, AS400 system architecture, AS400 advantages and basic features, concept of library its creation, concept of object oriented language, Future of AS400 respect to its</p>
<p>Day-2: AS400 Work Management</p> <p>Concept of work management, AS400 Work management elements(OS/400, Subsystem, Job, Library, Objects), Concept of OS/400 functions with commands, Concept of subsystems functions types creation method with commands, Concept of Job its types job commands job status job attributes job scheduling, job queue concept commands types, putput queue concept commands types, spool files concept, job log concept and features, user profile concept and its commands, library types and concept of library list, object types and different lock status.</p>
Holiday-Christmas
<p>Day-3: AS400 file systems</p> <p>AS400 file system intro, AS400 file types, file commands, AS400 SAVE file usage and creation, file levels, file description types, attributes of database files(triggers, record format, access path, members, constraints) in detail</p>
<p>Day-4:AS400 physical files</p> <p>pf details, data types, pf levels, pf keywords at each level, pf attributes, pf commands, Field reference file, flat files. HANDSON of above topics</p>
<p>Day-5:AS400 logical files</p> <p>lf details, non join multi format lf details, non join single format details, non join lf levels, non join lf all level keywords, join lf details, join lf levels, join lf keywords</p>
OFF
<p>Day-6: STRDFU and Query/400</p> <p>STRDFU details, Insert/Update/Delete records using STRDFU</p> <p>Query/400 details, commands related to query files, Using query for different output types(display, printer, database), using different types of joining files, creation of reports with report summary, report breaks</p> <p>HANDSON of above topics</p>
<p>Day-7: SQL</p> <p>Introduction to SQL, ways of using sql in as400, SQL objects</p> <p>DDL - data types, CREATE, ALTER, DROP, GRANT, REVOKE(TABLE/VIEW/INDEX, COLUMNS)</p> <p>DML - SELECT(WHERE clause, GROUP BY, HAVING, ORDER BY, COUNT), Data Type conversion, using functions CAST/SUM/AVG/MIN/MAX/CONCAT,SUBSTR,TRIM,DIGITS,CURDATE, INSERT(single row, multiple rows, using select), UPDATE(Scalar subselect), Delete(), Joins(INNER,LEFT OUTER, UNION), Subquery, Using IN, BETWEEN, EXISTS, LIKE %, AS, Creating Backup,Commitment Control, Trigger execution using sql queries</p> <p>HANDSON of above topics</p>
Assessment

#### Day-8: Device files(report and screen)

device - understanding screens, screen types, command strsd,

menu - understanding and creation of menu

display file - understanding of display files(record formats,keywords(overlay, putovr, edtcde, rtncsrloc, CA/CF functions keys),field types) and creation of display files(single record format, multi record format)

subfiles - understanding subfiles, subfile types, subfile keywords, session/device error, understanding opcode/keywords of readc, sflnxtchg, sflcsrrn, csrloc, MDT field, programs for subfile(loadall, extend, single page, changed record, position to, cursor position)

windows - understanding of windows, window features, window keywords, creating windows, creating windows over display files, creating windows over subfiles

Report - Understanding reports, uses, spool files, printer files and types(ibm supplied)

rlu - understanding report layout function(record format, keywords), creation of reports(single format, multi format of

#### Assessment

#### Day-9:RPGLE

Introduction to RPGLE, differences/advantages of RPGLE compared to RPG respect to increased length/new opcodes/additional file declarations

Introduction to ILE core features

Introduction and explanation of specs in RPGLE, use of each specs in detail

Variable, array, data structure declaration in rpgle with keywords

#### Day-10,11,12,13,14,15:RPGLE programming

Usage of move operations including EVAL and extended factor 2

Usage of conditional statements(IF-ELSE, SELECT-WHEN), Loops(DO, DOW, DOW, FOR)

Usage of different types of opcodes(arithmetic, relational, logical, date, move, string, branching, call, key, indicators, file)

Usage of different types of built in functions(arithmetic, relational, logical, date, move, string, type conversion, array, file)

Usage of call and subroutines

Usage of different types of arrays with keywords

Usage of different types of data structures, qualified, likeds, likerec

Usage of error handling(%error with extender E, MONITOR)

Usage of display files, window, subfiles(including message subfile), reports

Example of compiler directives, /COPY, /INCLUDE, /FREE /END-FREE, /IF /ELSE /ENDIF

Example of data area usage, data queue usage

#### Assessment

#### Day-16,17,18:CL

CL Commands-Understand CL commands(WRK, CRT, DSP, STR, CHG, ADD, RMV, END etc) on different objects/sources, creating commands

CL Programming Basics(Constants, Variables, Parameters, Expressions, Operators, Built in Functions)

CL Programming Advanced(Variable/File declaration, Conditional statements, Transfer Control, CHGVAR, Loops, Subroutines, INCLUDE, Call, dbf File Handling, display file Handling)

Understanding rtv commands, programs for rtvsysval, rtvneta, rtvusprpf, rtvmbrd, rtvjoba

Understanding concept of data area, data area types, data area commands, creating data area(user defined da, lda, remote da), data area locking and allocation, program for da(user defined, local data area)

Understanding data queue, data queue types, data queue commands/apis, creating data queue(normal, remote), creating data queue programs

Understanding OVRDBF, parameters of ovrdbf, ovrdbf(using rrn, using key field) programs

Understanding OPNQRYF, parameters of opnqryf, opnqryf(using ovrdbf, using qryslt) programs

Understanding messaging in as400, types of messages, different messages commands, programs for different types of messages - sndpgmmsg, sndusrmsg, sndmsg, dspmsg, rcvmsg, rmvmsg, understanding concept of message file, creating message file, creating messages, program for sending messages from message file

Understanding MONMSG, its types, program for monmsg(procedure level, command level)

Submitting job in batch/calling pgm using sbmjob, program debug, batch debug

Understanding IFS, Using commands cpyf, cpytoimpf, cpyfrmimpf, cpytostmf, cpyfrmstmf

#### Assessment

#### Day-19: RPG III

Introduction to RPG, RPG program structure, RPG III specifications and meaning of each spec

Detail of H / F / E / L / I / C / O specs with their significance, keywords and examples

Declaring different types of Variables and files

Conditional statements(if-else, select-when), Loops(do, dow, dow)

Concept of arrays and its types, tables, lookup

Concept of data structures and its types

Concept of indicators and types

Concept of subroutines, cab, cas, goto

Concept of error handling

Basic file opcodes, move opcodes, arithmetic opcodes, array opcodes, call

Creating 1 program each for if-else, select-when, loops, call, db file, display file, subfile, report

HANDSON on above topics

#### Assessment

**Day-20,21,22,23:RPGLE Core features**

Explanation of modules and binding by copy in details with example

Explanation of sub procedure, structure, P specs, types in details with example

Explanation of service program, signature concept, service program commands, binding by reference, export (\*all) and export(srcfile) with example

Explanation of signature violation and its resolution

Explanation of binder language, its structure, commands in detail. Explanation of usage in service program with example

Explanation of binding directory, its structure, commands, creation, usage with example

Explanation of activation groups, types in details. Example of different types of activation group

**Assessment**

**Day-24,25,26,27:Embedded SQLRPGLE**

Details of Embedded sql(sql compiler directives, comments, sql precompilers, host variables, host structures, host structures arrays, sql state and sql code, SET clause, commitment control, INCLUDE)

Usage of different types of SELECT queries, INSERT(1 record, multiple records, using SELECT) queries, UPDATE queries, DELETE queries without host variables and with host variables

Details on GET DIAGNOSTICS(usage of different statements to get status/error code/error desc/no of rows) with examples

Details on WHENEVER(SQLWARNING, SQLERROR, NOT FOUND) for error handling with examples

Details on CURSORS(why and how cursor is used, steps in cursor programming, types of cursor, types of fetch, fetch multiple, multiple cursors)

Programs on serial cursor with fetch single and fetch multiple

Programs on scrollable cursor with fetch single and fetch multiple. Fetch types of NEXT, PRIOR, FIRST, LAST, RELATIVE n.

Programs on SENSITIVE cursor

Subfile handling using cursor, read from last to first using cursor

Dynamic sql details(Uses of dynamic sql, advantages of dynamic sql over static sql, types of dynamic sql)

**Assessment**

**Day-28,29:AS400 Web Services**

Details on Web Service(Introduction, IWS, concept of REST and SOAP)

XML details(Introduction, structure, rules, tags, comments, element, attribute values) with creation(single level, multi level)

JSON details(Introduction, syntax, data types, objects, arrays, mapping of json elements to RPG elements) with creation(simple, array)

XML parsing details, using XML-INTO(case, allowmissing, allowextra,countprefix) with examples

Create XML using XMLGROUP

RPG XML error codes

Create Json using DATA-GEN, create JSON using DATA-GEN and \*start

**Assessment**



**Day-30,31: RPGLE Full Free Form**

Declaration - Basic Structure, C spec, Variable declaration with keywords, Constant declaration with keywords, File declaration with keywords, Procedure declaration, data structure declaration with keywords, embedded sql  
Opcodes/BIFs - Using db file, device file, array, date, data structure, call  
Programs on conditional statements, loops, arrays, data structures, db file operations, display files, subfiles, printer files, sub procedures, service program, cursor and dynamic sql  
HANDSON on above topics

**Assessment**

**Day-32,33: SQL stored procedures and functions**

SQL Stored Procedures details(Introduction, uses, advantages, basic commands, data types, parameters, conditional statements, loops, cursor, arrays,set, exception handling, debug, exceution, create sql variable)  
Example of SQL stored procedure - basic, with input parameters with set, input and output parameters, update statement, case when, cursor, if-else, while loop, for loop, get diagnostic  
SQL Array details(Introduction, types, sql array variable, array declaration, array commands, data types, assign values, functions) with programs  
External Stored Procedure details(Introduction, usage, execution) with example  
SQL Functions(Introduction, difference between stored procedures and functions, types with examples), UDF details(Introduction, types, commands, execution)  
Scalar UDF example - basic, case when, parameters  
UDTF example - basic, parameters  
External UDF - intro, commands, example

**Assessment**

**Capstone Project**

**Final Assessment**



Portion Completed

Yes

Yes



Yes

Yes

Yes



Yes

Yes

Yes

Yes

Yes

16th Jan will completed