Session - 7

ASKTIME

- Used to obtain current date and time

- Syntax :

  EXEC CICS **ASKTIME[ABSTIME(data-area)]**

  END-EXEC.

- EIBDATE and EIBTIME updated with current date and time

- ABSTIME returns value of time in packed decimal format

FORMATTIME

- Syntax :

```
EXEC CICS FORMATTIME  ABSTIME(data-ref)
                      [YYDDD(data-area)]
                      [YYMMDD(data-area)]... etc.
                      [DATE(data-area) [DATEFORM[(data-area)]]]
                      [DATESEP[(data-value)]]
                      [DAYOFMONTH(data-area)]
                      [MONTHOFYEAR(data-area)]
                      [YEAR(data-area)].....
                      [TIME(data-area) [TIMESEP[(data-value)]]]
END-EXEC.
```

Condition: INVREQ

DELAY

- Used to DELAY the processing of a task

- The issuing task is suspended for a specified interval or Until the specified time

- Syntax :

```
 EXEC CICS  DELAY
                              INTERVAL(hhmmss) |  TIME(hhmmss)
 END-EXEC
```

Conditions: EXPIRED, INVREQ

START

- Used to start a transaction at the specified terminal and at the specified time or interval

- Data can be passed to the new transaction

- Syntax :

```
EXEC CICS START
                 TRANSID(transid)
                  [TERMID(termid)
                  TIME(hhmmss) | INTERVAL(hhmmss) ]
END-EXEC
```

Conditions : INVREQ, LENGERR,TERMIDERR, TRANSIDERR

Other Interval Control Commands

- **POST** - to request notification when the specified time has expired.
- **WAIT EVENT** - to wait for an event to occur.
- **RETRIEVE** - Used to retrieve the data passed by the START
- **CANCEL** -Used to cancel the Interval Control requests. eg. DELAY,POST and START identified by REQID.
- **SUSPEND -** Used to suspend a task
- **ENQ -** to gain exclusive control over a resource
- **DNQ -** to free the exclusive control from the resource gained by ENQ

Terminal Conversation

- **Conversational** : A mode of dialogue between program and terminal based on a combination of sending message and receiving message within the same task

- **Pseudo-Conversational**. A mode of dialogue between program and terminal which appears to the operator as a continuous conversation but which is actually carried by a series of tasks

Conversational Transaction Example

```
 PROCEDURE DIVISION.
:
 FIRST-PROCESS.
      EXEC CICS RECEIVE   ---- <= TSK1,12345
      END-EXEC.
      :  process
      EXEC CICS SEND       -----  <=  EMP(12345) Details
      END-EXEC.
*         - - - - - -  Program Waits  For  Response - - - - -
  SECOND PROCESS.
      EXEC CICS RECEIVE   -----  <=    User Enters Data
      END-EXEC.
      :   process
```

Pseudo Conversational Example

Transaction TSK1

Program PROG1

```
PROCEDURE DIVISION.
          :
    EXEC CICS   RECEIVE
    END-EXEC.
                 :
    EXEC CICS  SEND
    END-EXEC.
    EXEC CICS  RETURN
          TRANSID ('TSK2')
    END-EXEC.
```

Transaction TSK2

Program PROG2

```
PROCEDURE DIVISION.
          :
    EXEC CICS   RECEIVE
    END-EXEC.
                 :
    EXEC CICS  SEND
    END-EXEC.
    EXEC CICS  RETURN
    END-EXEC.
```

Recap

- How will you get the system date & time ?
- What is delay command meant for?
- What is terminal conversation?
- What is pseudo conversation?
- Name the pseudo conversation techniques
- Explain pseudo conversation Technique III

Lab Session

Current Date & Time

```
•  000001     IDENTIFICATION DIVISION.
•   000002     PROGRAM-ID. TTT.
•   000003     ENVIRONMENT DIVISION.
•   000004     DATA DIVISION.
•   000005     WORKING-STORAGE SECTION.
•   000006     01 DTIME.
•   000007        02 M-DATE     PIC X(15).
•   000008        02 F          PIC X(2).
•   000009        02 WS-DATE    PIC 9(10).
•   000010        02 F          PIC X(53).
•   000011        02 M-TIME     PIC X(15).
•   000012        02 F          PIC X(2).
•   000013        02 WS-TIME    PIC 9(8).
•   000014     77 SYSDT       PIC S9(15) COMP.
```

```
000015       PROCEDURE DIVISION.
000016        PARA1.
000017            MOVE LOW-VALUES TO DTIME.
000018            EXEC CICS ASKTIME
000019                ABSTIME(SYSDT)
000020            END-EXEC.
000021            EXEC CICS FORMATTIME
000022                ABSTIME(SYSDT)
000023                DATE(WS-DATE)
000024                DATESEP('-')
000025                TIME(WS-TIME)
000026                TIMESEP(':')
000027            END-EXEC.
000028            MOVE "CURRENT DATE : " TO M-DATE.
000029            MOVE "CURRENT TIME : " TO M-TIME.
000030            EXEC CICS SEND
000031                FROM(DTIME)
000032                ERASE
000033            END-EXEC.
000034            EXEC CICS
000035                RETURN
000036            END-EXEC.
000037            STOP RUN.
```

Pseudo Conversation – Technique I
Program – I Transid - I

```
//MAPLE41B JOB ,,CLASS=M,
//   MSGLEVEL=(1,1),NOTIFY=MAPLE41,TIME=(1)
//   JCLLIB  ORDER=(MAPLE41.CICS.TEMP1)
//STEP1   EXEC PROC=DFHEITVL
//TRN.SYSIN     DD  *
       IDENTIFICATION DIVISION.
       PROGRAM-ID. TTTT.
       ENVIRONMENT DIVISION.
       DATA DIVISION.
       WORKING-STORAGE SECTION.
       77 MSG      PIC X(25).
       PROCEDURE DIVISION.
       PARA1.
           MOVE "THIS IS PERSON I" TO MSG.
```

```
000015            EXEC CICS SEND
000016                 FROM(MSG)
000017                 LENGTH(LENGTH OF MSG)
000018                 ERASE
000019            END-EXEC.
000020            EXEC CICS RETURN
000021                 TRANSID('MP39')
000022            END-EXEC.
000023 /*
000024 //COB.SYSLIB    DD DISP=SHR,DSN=MAPLE41.SYSMB.PDS
000025 //LKED.SYSLMOD  DD DISP=SHR,DSN=CICSTS22.MAPLE.PRGLOAD(MAPLE41P)
000026 //LKED.SYSIN    DD *
000027   NAME MAPLE41P(R)
000028 /*
000029 //
```

Pseudo Conversation – Technique I
Program – II Transid - II

```
000001 //MAPLE39B JOB ,,CLASS=M,
000002 //   MSGLEVEL=(1,1),NOTIFY=MAPLE41,TIME=(1)
000003 //   JCLLIB  ORDER=(MAPLE41.CICS.TEMP1)
000004 //STEP1   EXEC PROC=DFHEITVL
000005 //TRN.SYSIN     DD  *
000006        IDENTIFICATION DIVISION.
000007        PROGRAM-ID. TTTT.
000008        ENVIRONMENT DIVISION.
000009        DATA DIVISION.
000010        WORKING-STORAGE SECTION.
000011        77 MSG      PIC X(25).
000012        PROCEDURE DIVISION.
000013        PARA1.
000014            MOVE "RETURNED TO PERSON II" TO MSG.
000015            EXEC CICS SEND
```

- 000016 FROM(MSG)
- 000017 LENGTH(LENGTH OF MSG)
- 000018 ERASE
- 000019 END-EXEC.
- 000020 EXEC CICS
- 000021 RETURN
- 000022 END-EXEC.
- 000023 STOP RUN.
- 000024 /*
- 000025 //COB.SYSLIB DD DISP=SHR,DSN=MAPLE41.SYSMB.PDS
- 000026 //LKED.SYSLMOD DD DISP=SHR,DSN=CICSTS22.MAPLE.PRGLOAD(MAPLE39P)
- 000027 //LKED.SYSIN DD *
- 000028 NAME MAPLE39P(R)
- 000029 /*
- 000030 //

Pseudo Conversation – Technique 3

```
000001      IDENTIFICATION DIVISION.
000002      PROGRAM-ID. TTT.
000003      ENVIRONMENT DIVISION.
000004      DATA DIVISION.
000005      WORKING-STORAGE SECTION.
000006      77 WKA PIC X.
000007      77 MSG PIC X(20).
000008      77 A PIC 99.
000009      77 B PIC 99.
000010      77 C PIC 9(3).
000011      LINKAGE SECTION.
000012      01 DFHCOMMAREA.
000013         02 LKA PIC X.
```

```
000014    PROCEDURE DIVISION.
000015    PARA1.
000016        MOVE 20 TO A.
000017        MOVE 30 TO B.
000018        IF EIBCALEN = 0
000019          MOVE "TRANS 1: ADDITION " TO MSG
000020          COMPUTE C = A + B
000021          EXEC CICS SEND TEXT
000022             FROM(MSG)
000023             LENGTH(LENGTH OF MSG)
000024             ACCUM
000025          END-EXEC
000026          EXEC CICS SEND TEXT
000027             FROM(C)
000028             LENGTH(LENGTH OF C)
000029             ACCUM
000030          END-EXEC
000031         EXEC CICS SEND PAGE END-EXEC
000032         MOVE 'A' TO WKA
```

```
000033        EXEC CICS RETURN
000034           TRANSID('MP41')
000035           COMMAREA(WKA)
000036        END-EXEC.
000037       IF EIBCALEN NOT EQUAL TO 0
000038         MOVE "TRANS 2 : MULTIPLICATION " TO MSG
000039         COMPUTE C = A * B
000040        EXEC CICS SEND TEXT
000041           FROM(MSG)
000042           LENGTH(LENGTH OF MSG)
000043           ACCUM
000044        END-EXEC
000045        EXEC CICS SEND TEXT
000046           FROM(C)
000047           LENGTH(LENGTH OF C)
000048           ACCUM
000049        END-EXEC
000050        EXEC CICS SEND PAGE END-EXEC
000051        EXEC CICS
000052            RETURN
000053        END-EXEC.
000054        STOP RUN.
```