

TUTORIAL#2

We know that a person has to pay zakkat ($1/40$ of his total savings) if total savings exceeds the Nissab (NB) and if also it exceeds one year. Let (TS) be the total savings of a person, (N) the number of days this total savings is in his hands and (NB) the Nissab. You are required to do the following:

- a. Write an organigram to read the inputs (TS,NB,N) and calculate and print the amount of Zakkat (Z) to be paid.
- b. Convert the organigram into a FORTARN90 program. Use exclusively IF...THEN statement with (OR) as logical operator.

TUTORIAL#3

Q1. How many times the print statement will be executed ?

(a) DO K= 1,27

```
PRINT * , K
IF (K. GT . 19) EXIT
END DO
```

(b) DO I= 1,5

```
DO J= 5,25,5
PRINT * ,I * J
END DO
END DO
```

No. of times =.....

No. of times =.....

Q2. What is the value of K for the following program?

```
K= 0
DO N = 1,2
DO J = 3,4
K = K + N+ J
END DO
END DO
PRINT * ,K
STOP
END
```

K =.....

Q3. After executing the following program , how many times , the word ALI is printed ?

```
Outer : DO I = 8, 3,-2
PRINT * ," ALI "
Inner : DO J = 3,5,4
PRINT * , " ALI"
END DO Inner
END DO Outer
END
```

NO. of times =.....

GE209 FORTRAN PROGRAMMING

Q4. Follow the execution of the following program and print out the results:

```

LOGICAL: : FLAG
INTEGER, PARAMETER: : K=5 , J= 10
Do M =16 , 4 ,-4
I = J - M/K
FLAG= .TRUE.
5 IF(.NOT. FLAG) GO TO 10
N= K*MOD ( M,I)
IF ( N. GE . M . OR . .NOT . ( N. EQ . K ) ) THEN
PRINT * , " It is good "
ELSE
RPINT * , " It is bad "
END IF
END DO
FLAG = .FALSE.
GO TO 5
10 PRINT * , "Program is Finished "
STOP
END
    
```

K	J	M	I	N	FLAG

Print out

TUTORIAL#4

Q1. Follow the execution of the following program and write its output (from “out” file).

<pre> INTEGER A(5,5),B(5),X(5),UTS OPEN (UNIT=7,FILE='IN ',STATUS='OLD') OPEN (UNIT=8,FILE ='OUT', STATUS='NEW') READ(7,*) N DO I= 1,N READ(7,*)A(I,1), A(I,2),A(I,3) END DO READ(7,*)(X(I),B(I),I =1,N) SUM=0 DO I= 1, N DO J= I+1, N SUM= SUM+A(I,J) END DO END DO UTS = SUM DO I= 1, N WRITE(8,*) B(I), X(I), UTS END DO DO I=1, N WRITE(8,*) (A(I,J),J= 1,N) END DO Do I = 1, N DO J = 1, N IF (I > J) THEN A(I,J) = 1 ELSE IF (I == J)THEN A(I,J) = 0 ELSE A(I,J) = -1 END IF END DO END DO DO I=1, N WRITE(8,*) (A(I,J),J= 1,N) END DO CLOSE (7) CLOSE (8) END </pre>	<pre> The data file "IN" 3 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 </pre>
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TUTORIAL#5

Q1. Construct a main program (MAIN) and an

- (a) internal subroutine subprogram (RECIPROCAL)
- (b) external subroutine subprogram (RECIPROCAL) to read real numbers R1,R2,R3,R4 and calculate their reciprocals and print the results.

Q2. Write a function subprogram (SUMS) to sum up the series:

$$\sum_{i=m}^n b^i$$

where (b) is a real constant. The result of the function evaluation is to have a name different from the function name (say, RESULT).
