

System Software

Tutorial 9

Ans 1.

A sequencing symbol has the syntax
<ordinary string>

As the sequencing symbol is defined by putting it in the field 'LABEL' of a statement in the macro body, this LABEL field will act as a target address on which control is transferred for conditional as well as unconditional way.

Syntax of AIF:- Conditional Jump

AIF <expression> <LABEL Sequential Symbol>

Syntax of AGO:- Unconditional Jump

AGO <Sequential Symbol>

Syntax of ANOP:-

<Sequential Symbol> ANOP

Example:-

AIF (&Y EQ &X) AGAIN

AGO NEXT

AGAIN: ANOP

MOVER AREG, BREG

NEXT: ANOP

MEND

The REPT directive will repeat a block of code specified a number of times. It does not have a name, so it is not a MACRO.

For example,

REPT that acts like a dup

REPT 10

db 0

end m

REPT to allocate and initialise data with different values.

value = 0

REPT 10

db value

value = value + 1

end m

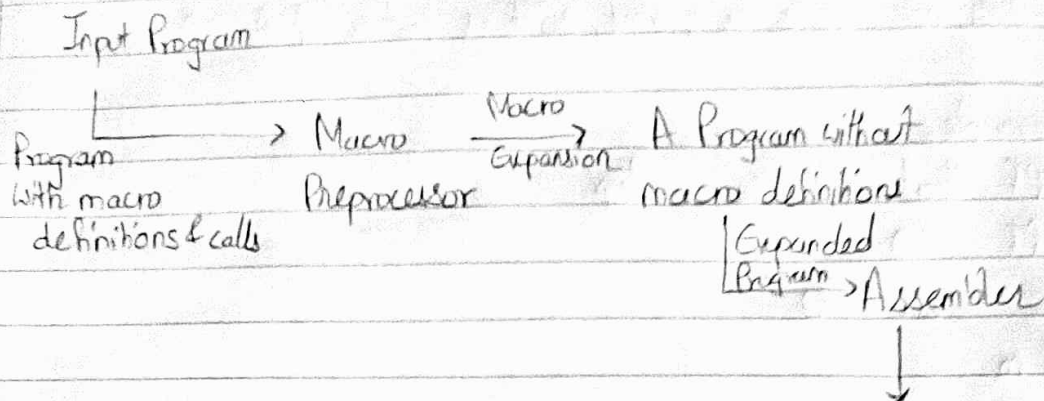
The IRP is used to like REPT, except, the IRP loops over the values that you send it.

IRP arg < >

db *arg

endm

Ans 3.



Language Translators cannot directly generate target code from programs containing macro definitions and calls.

Therefore, most language processing activities by assemblers and compilers preprocess these programs through macro preprocessor.

A macro preprocessor essentially accepts an assembly program with macro definitions and calls as its input.

It converts into an equivalent expanded assembly program with no macro definitions and calls.