

**Problem statement :** Consider the following data structures as input to PassII of a two pass Macro Pre-processor. Show the contents of APTAB and expanded code for each Macro Call given below :

**1)Input data structures (MNT, KPDTAB, MDT)**

**MNT**

<b>MNT Index</b>	<b>Name of Macro</b>	<b>#PP</b>	<b>#KP</b>	<b>MDTP</b>	<b>KPDTP</b>
1	M1	2	2	1	1
2	M2	2	2	6	3

**KPDTAB**

<b>KPDTP</b>	<b>Name of keyword parameter</b>	<b>Default value (if any)</b>
1	A	AREG
2	B	-----
3	U	CREG
4	V	DREG

## MDT and PNTAB

MDT	
1	MOVER (P,3), (P,1)
2	ADD (P,3), ='1'
3	MOVER (P,4), (P,2)
4	ADD (P,3), ='1'
5	MEND
6	MOVER (P,3), (P,1)
7	MOVER (P,4), (P,2)
8	ADD (P,3), ='15'
9	ADD (P,4), ='10'
10	MEND

## 2)Macro Calls

- a) M1 10, 20, &B=CREG
- b) M2 100, 200, &V=AREG, &U=BREG
- c) M2 100, 200, &V=AREG, &U=BREG

## Solution

a) M1 10, 20, &B=CREG

### APTAB

1	10
2	20
3	AREG
4	CREG

### Expanded Code

```
+ MOVER AREG, 10  
+ ADD AREG, ='1'  
+ MOVEM AREG, 20  
+ ADD AREG, ='1'
```

b) M2 100, 200, &V=AREG, &U=BREG

### APTAB

1	100
2	200
3	BREG
4	AREG

### Expanded Code

```
+ MOVER BREG, 100  
+ MOVER AREG, 200  
+ ADD BREG, ='15'  
+ ADD AREG, ='10'
```