Assignment no - 13

Title - Write a Terminate but stay Resident (TSR) program to generate the pattern of the frequency tones by reading the Real Time clock (RT)

Problem Statement - Write a TSR program to generate the pattern of the frequency tones by reading the Real Time Clock (RTC)

Objective - To understand Terminate but stay Resident program.

Outcome - students will study Terminate but stay program to display Real Time clock.

Theory -

Structure of Program is TASM

```
.MODEL SMALL
.STACK 50h
.DATA                  or Data segment
.CODE                  or code segment

START:
    ;
    ;Your code goes here
    ;
mov ax,4C00H
int 21H
END START
```

Possible MODELS are:

① TINY : Code and Data must fit in some 64k segment. Both code and Data are NEAR.

② SMALL : Code and Data have separate segment, but must be each less than 64k. Both code and Data are NEAR. For most applications, this is sufficient.

③ MEDIUM : Code may be larger than 64k, but Data has to be less than 64k. Code is FAR, Data is NEAR.

④ COMPACT : Code is less than 64k, but Data may be greater than 64k code is NEVER, Data is FAR.

⑤ LARGE : Both code and Data can be greater than 64k. Both are FAR, but a single array cannot be greater than 64k.

⑥ HUGE : Same as large, but arrays can be greater than 64k

Terminate and stay Resident (TSR) generally refers to a special class of programs for PC-compatible computers running DOS.

When a user exists a normal program running in DOS, the memory that the program used is usually freed for other programs and take, therefore the program must be reloaded from a

disk back into memory for it to be used again. When you run a TSR program, however, it loads itself into the computer's memory and remains there for later use. You may run other program while the TSR is still alive in the memory., and these programs may invoke the TSR or be affected by the behaviour of the TSR program. For this reason, TSR program may give Dos the appearance of multitasking which is built into many other operating system.

You may use TSR programs for a wide variety of tasks. Some of these programs are active only when you press a hot key. An example would be a pop-up calculator program that appears on the screen. When you press Alt+Shift+C, even from within a separate word processing program other TSR programs run continuously in the background and may normally be invisible. Example of such programs that monitor are same network and communication programs and special virus scanner programs that monitor the use of computer's memory and disk drives. Still other TSR programs may operate in both ways.

The program may be quite complex, are often difficult to program reliably. TSR programmer must make sure that their programs do not conflict with other programs active in computer's memory.

classmate
Date
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Conclusion - We have successfully implemented Terminate but Stay Resident (TSR) program and generated pattern of the frequency tones by reading the Real Time clock (RTC)