|  |  |  |
| --- | --- | --- |
| S0: | if (Start = ‘1’) then  CLR | go to S1 |
|  | else | go to S0 |
| S1: | WR\_DARA\_TO\_RAM | go to S2 |
| S2: | if (Enter = ‘1’ and ADDR\_CT != “1010”) then  INC\_ADDR\_CT | go to S1 |
|  | elsif(Enter = ‘1’ and ADDR\_CT = “1010”) then | go to S3 |
|  | else | go to S2 |
| S3: | WR\_DATA\_TO\_REG | go to S4 |
| S4: | INC\_DATA\_REG, DEC\_ADDR\_CT | go to S5 |
| S5: | ADD\_REG\_WITH\_RAM | go to S6 |
| S6: | ADD\_REG\_WITH\_RAM | go to S7 |
| S7: | ADD\_REG\_WITH\_RAM | go to S8 |
| S8: | ADD\_REG\_WITH\_RAM | go to S9 |
| S9: | ADD\_REG\_WITH\_RAM | go to S10 |
| S10: | ADD\_REG\_WITH\_RAM | go to S11 |
| S11: | ADD\_REG\_WITH\_RAM | go to S12 |
| S12: | SHIFT\_REG | go to S13 |
| S13: | SHIFT\_REG | go to S14 |
| S14: | SHIFT\_REG, INC\_ADDR\_CT | go to S15 |
| S15: | WR\_REG\_TO\_RAM | go to S16 |
| S16: | if (ADDR\_CT = ‘0001’) then  DEC\_ADDR\_CT | go to S3 |
|  | else | go to S17 |
| S17: | OUT\_DATA | go to S18 |
| S18: | if (Enter = ‘1’ and ADDR\_CT != “1010”) then  INC\_ADDR\_CT | go to S17 |
|  | elsif (Enter = ‘1’ and ADDR\_CT = “1010”) | go to S0 |
|  | else | go to S18 |