MICROPROCESSOR BASED SYSTEM DESIGN LAB

LAB 12

Spring 2021

CSE307L MBSD Lab

Submitted by: **Shah Raza**

Registration No. : **18PWCSE1658**

Class Section: **B**

"On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work."

Student Signature: _____

Submitted to:

Engr. Amaad Khalil

Tuesday, August 10, 2021

Department of Computer Systems Engineering

University of Engineering and Technology, Peshawar

Task 1:

Interface 8051 microcontroller serially with PC (virtual termnal) and display your name, registration number, semester number, department name and university name.

Code:

```c
#include <reg51.h>
#include <stdio.h>
#include <string.h>

char Name[] = "Name: Shah Raza\n";
char Semester[] = "Semester: 6th\n";
char University[] = "University: UET\n";
char Reg[] = "Reg No: 18PWCSE1658\n";
int i;

void main(void)
{
 TMOD = 0x20; //Timer 1 mode 2
 TH1 = 0xFD;   //9600 bps
 SCON = 0x40; //Mode 1 serial communication
 PCON = 0x00; //SMOD = 0
 TR1= 1;                //Start timer 1
 for(i=0;Name[i]!='\0';i++)
 {
   SBUF = Name[i];
  while(TI==0);          //While the SBUF is not transmitted, do nothing
   TI = 0;
 }
 printf("\n");
 for(i=0;Semester[i]!='\0';i++)
 {
   SBUF = Semester[i];
  while(TI==0);          //While the SBUF is not transmitted, do nothing
   TI = 0;
 }
 printf("\n");
 for(i=0;Reg[i]!='\0';i++)
 {
   SBUF = Reg[i];
  while(TI==0);          //While the SBUF is not transmitted, do nothing
   TI = 0;
 }
 printf("\n");
 for(i=0;University[i]!='\0';i++)
 {
   SBUF = University[i];
  while(TI==0);          //While the SBUF is not transmitted, do nothing
   TI = 0;
 }
 printf("\n");

 while (1)
   ;
}
```
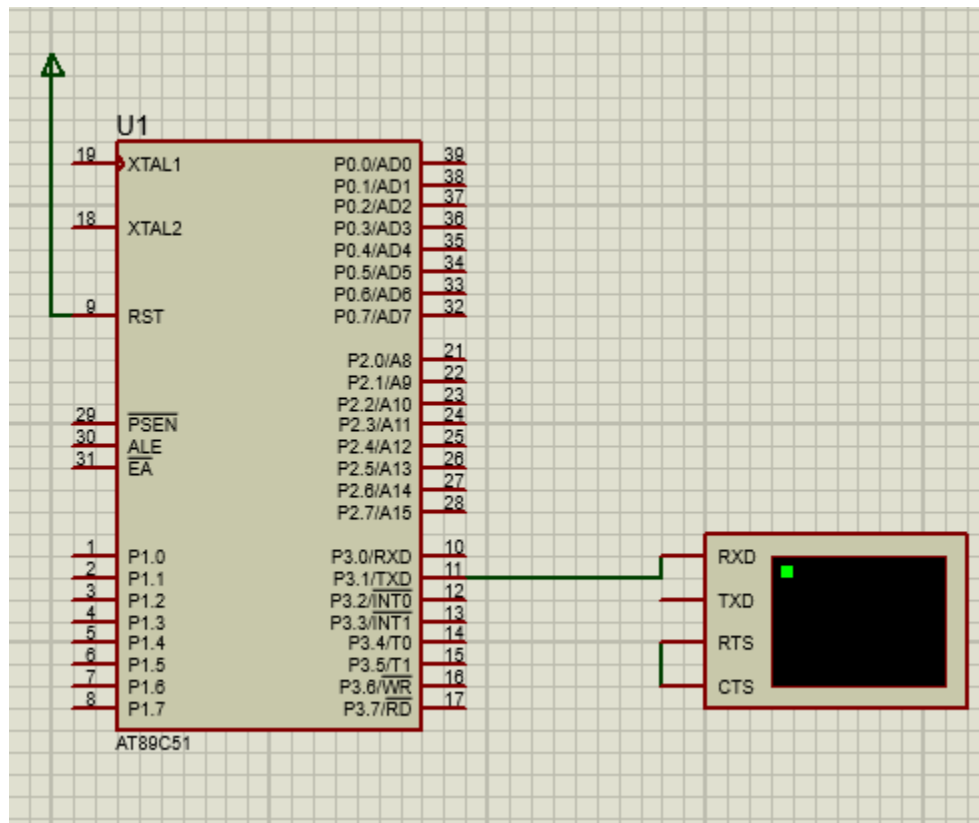
Output / Graphs / Plots / Results:

Schematic:

Output:

Virtual Terminal

```
Name: Shah Raza
Semester: 6th
Reg No: 18PWCSE1658
University: UET
```