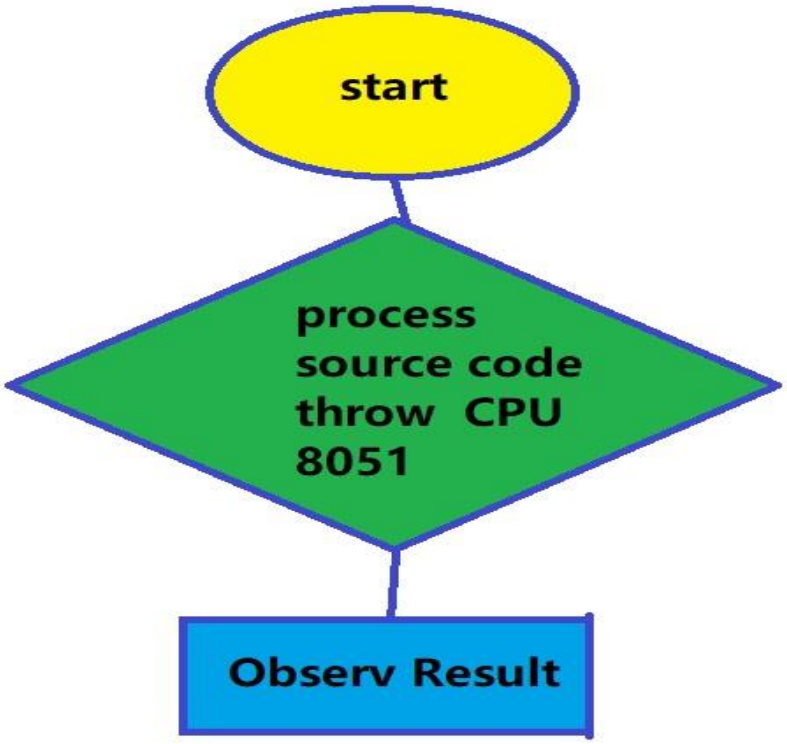
Hubei University of Technology

Experiment report

Grade	

Course name	Embedded SYSTEMS AND DESIGNS			
Experimental name	EXPERIMENT 1 – **GPIO control water flow LED**			
Departments	COMPUTER SCIENCE	**Lecturer**	Dr. Liu Chun	
Name	**Rimon Mahmud**	Student id	**1811561124**	
Experimental purpose	The aim of this experiment is to design a GPIO control water flow LED with Processor: AT89C51			
Experimental preparation	**1.Experimental environment:** PROTEUS 8 PROFESSIONAL, WINDOWS 10 **2. Knowledge preparation：** AT89C51 processor, C language.			
Experimental content	GPIO control water flow LED with Processor: AT89C51			
Experimental analysis	In this project we have been familiar with Processor AT89C51			

Experimental flowchart	

Code	#include <REGX52.h>
	void Delay1ms(unsigned int count){
	unsigned int i,j;
	for(i=0;i<count;i++)
	for(j=0;j<120;j++);
	}
	main()
	{
	unsigned char LEDIndex=0;
	bit LEDDirection=1;
	while (1)
	{
	if (LEDDirection)
	P1=~(0x01<<LEDIndex);
	else
	P1=~(0x80>>LEDIndex);
	if(LEDIndex==7)
	LEDDirection=!LEDDirection;
	LEDIndex=(LEDIndex+1)%8;
	Delay1ms(100);
	}
	}