21BDS0340

Abhinav Dinesh Srivatsa

Electronics Lab
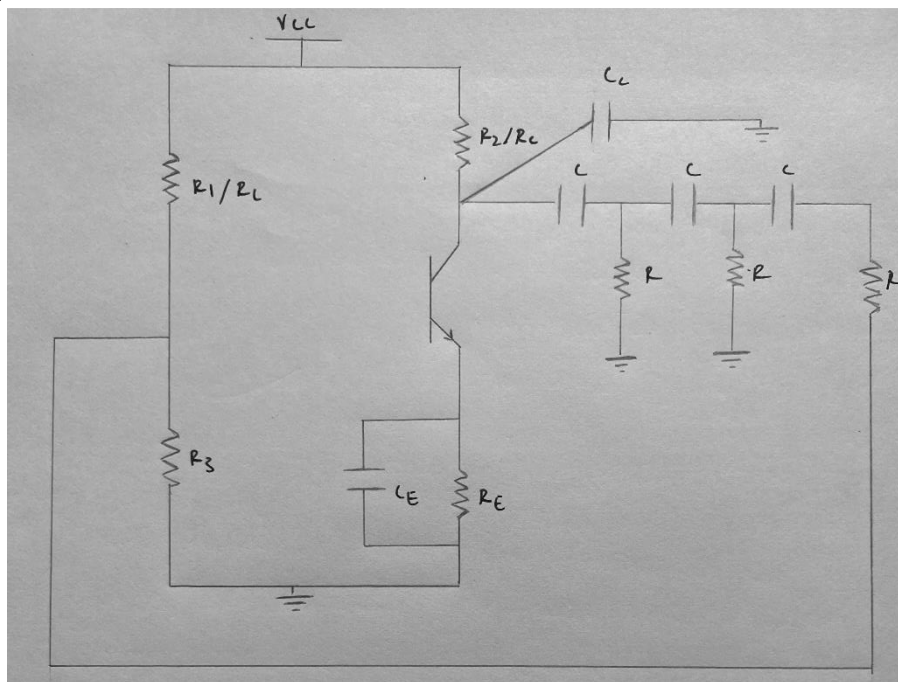
Task 4

Exercise No.: 1   Date: 16/04/22

RC Phase Shift Oscillator
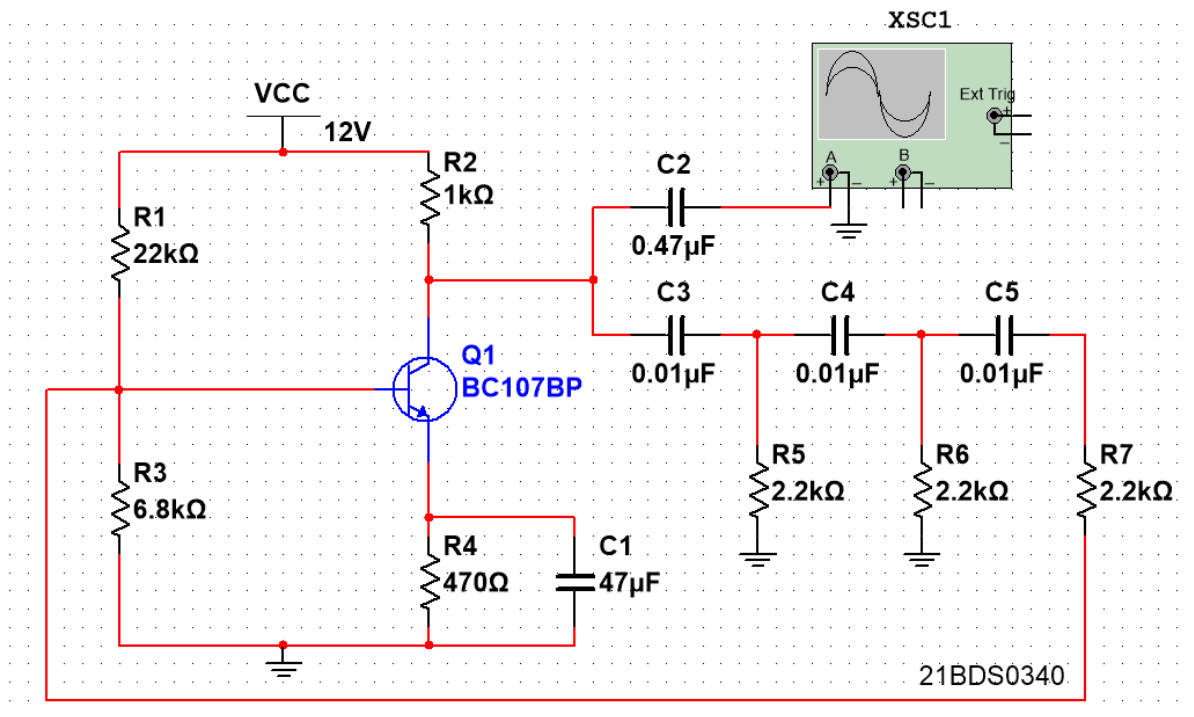
Circuit Diagram

Components Required

Basic – Resistors, Capacitors

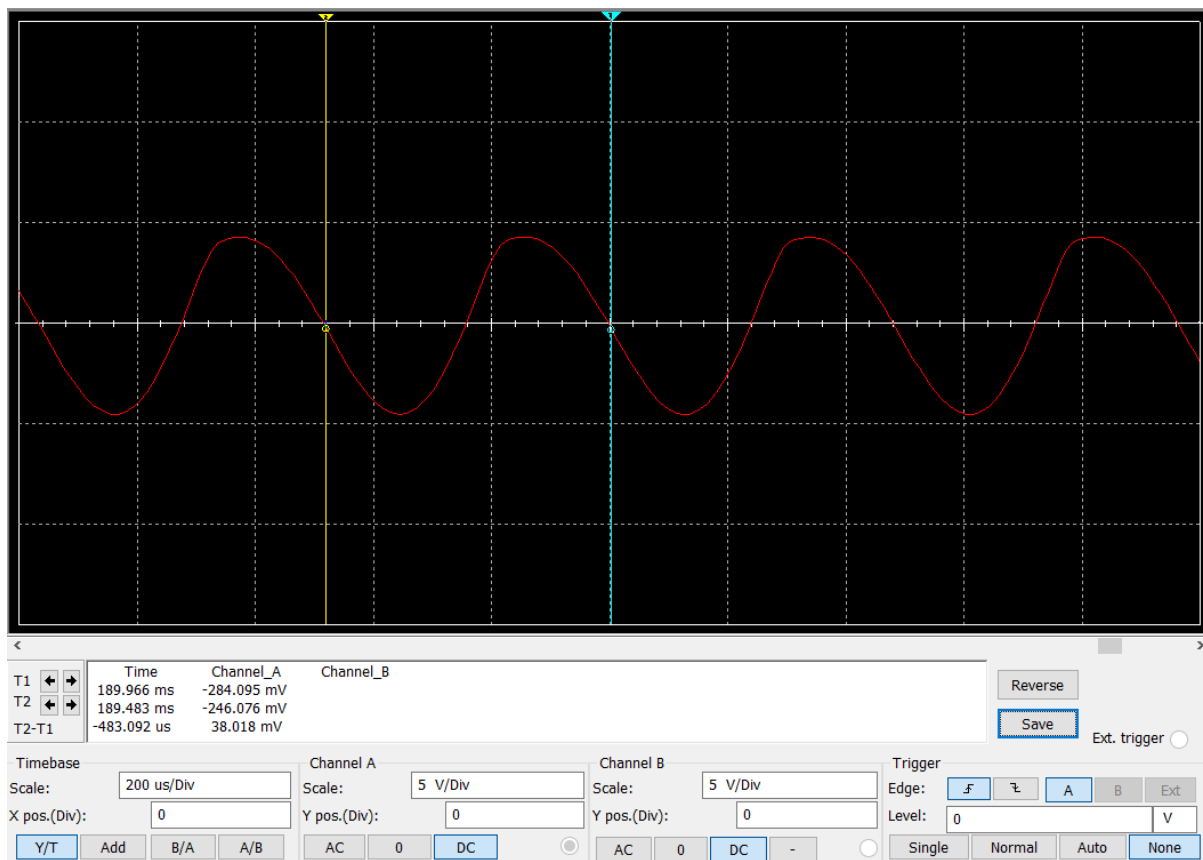Sources – VCC, Ground, AC_Voltage

Transistors – BC547BP

Simulate – Instruments – Oscilloscope

Simulated Circuit Diagram

Simulated Output

Calculations from Simulated Graph

$$f = \frac{1}{2\pi RC \sqrt{6+4K}}$$

$R = 2200 \text{ ohms}$

$L = 0.013 \mu F$

$K = \frac{R_L}{R} = 0.454$

$\therefore f = 2000 \text{ Hz}$

Verification Message

Exercise No.: 2   Date: 19/05/22

Logic Gates

Truth Table

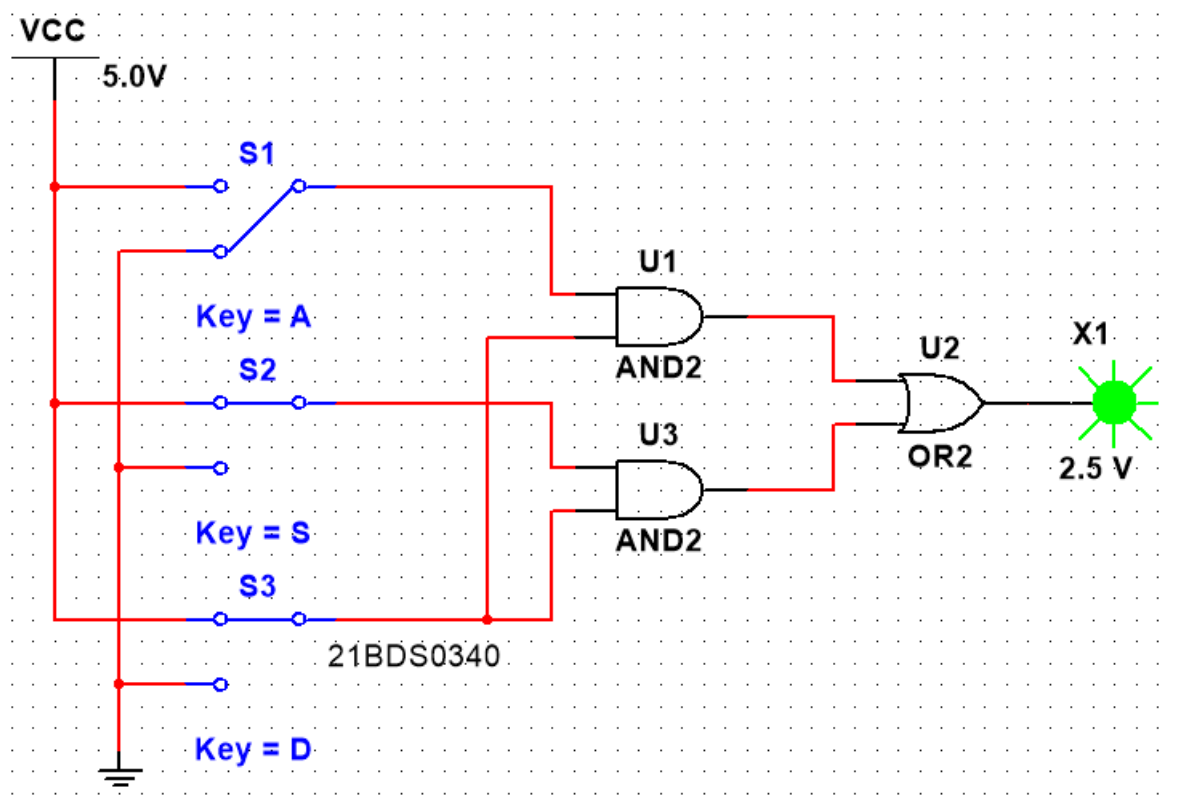| A	B	C	AC	BC	AC + BC
0	0	0	0	0	0
0	0	1	0	0	0
0	1	0	0	0	0
0	1	1	0	1	1
1	0	0	0	0	0
1	0	1	1	0	1
1	1	0	0	0	0
1	1	1	1	1	1

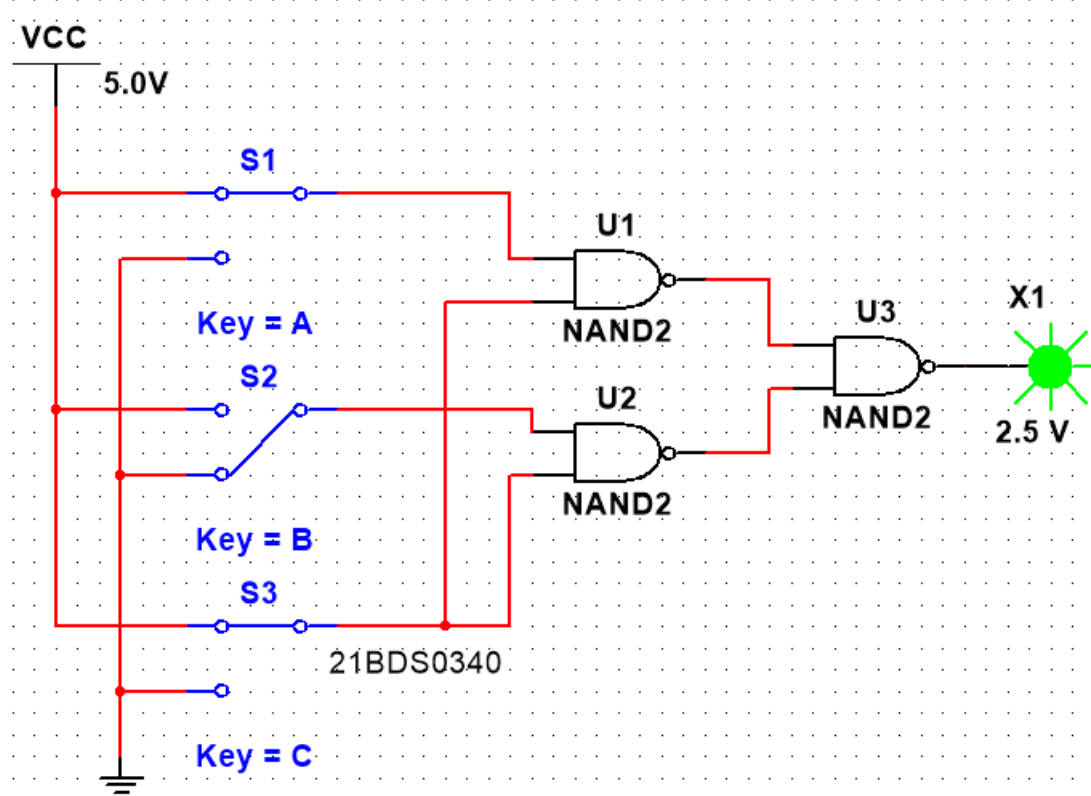**Components Required**

Basic – Switch – SPDT

Sources – Power Sources – VCC, Ground

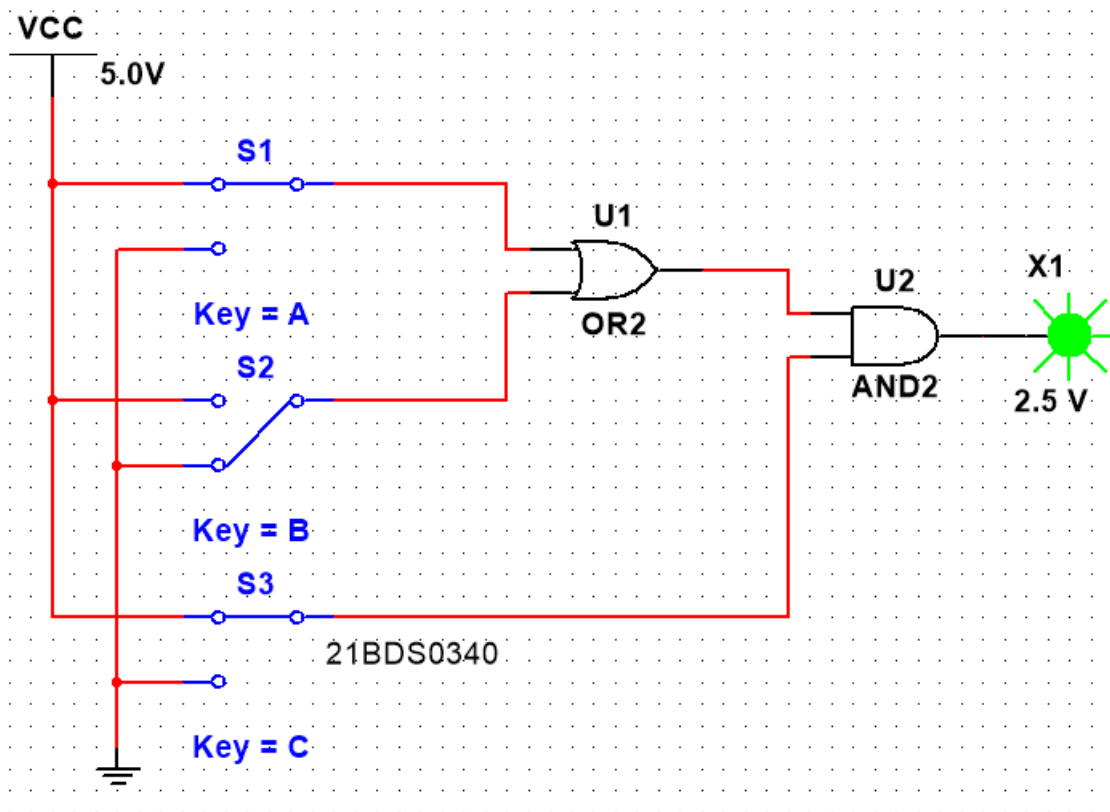TTL – 7408N, 7401N, 7432N
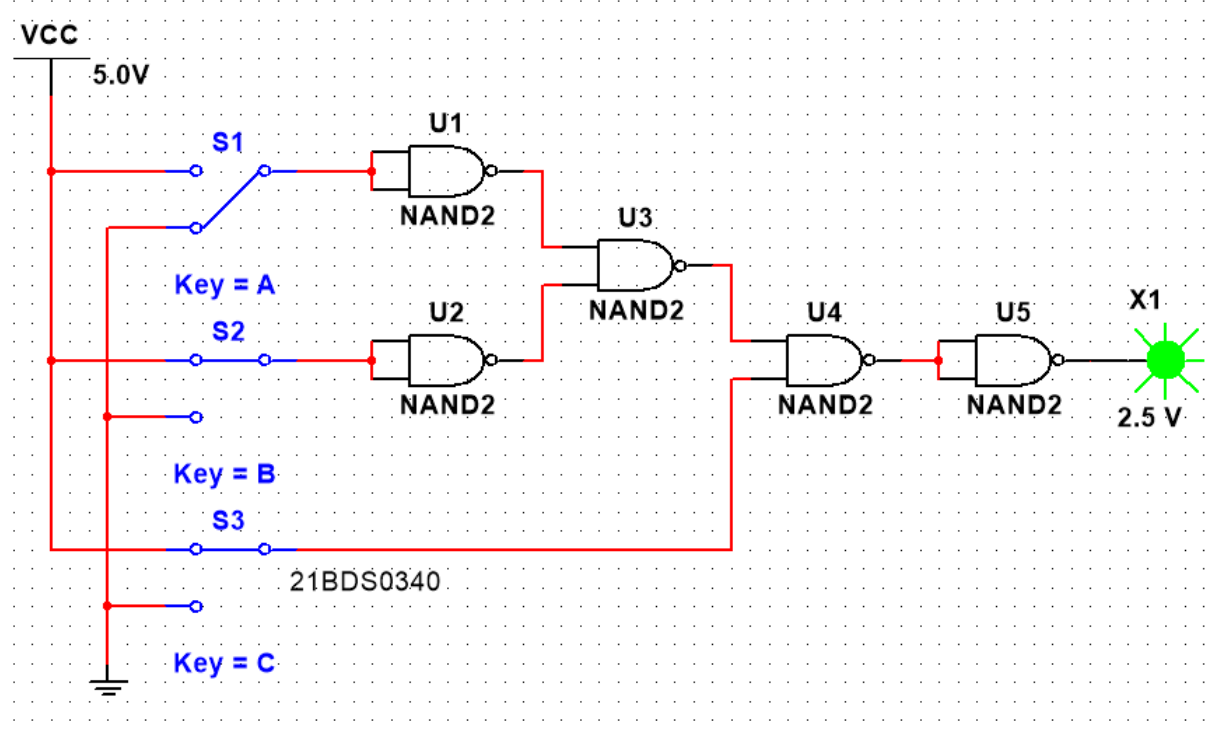
Simulated Circuit Diagram 1

Simulated Circuit Diagram 2

Simulated Circuit Diagram 3

Simulated Circuit Diagram 4

Verification Message

KM KRISHNA CHAITHANYA MUNTHA   11:19
21BDS0340-Exp 9 verified