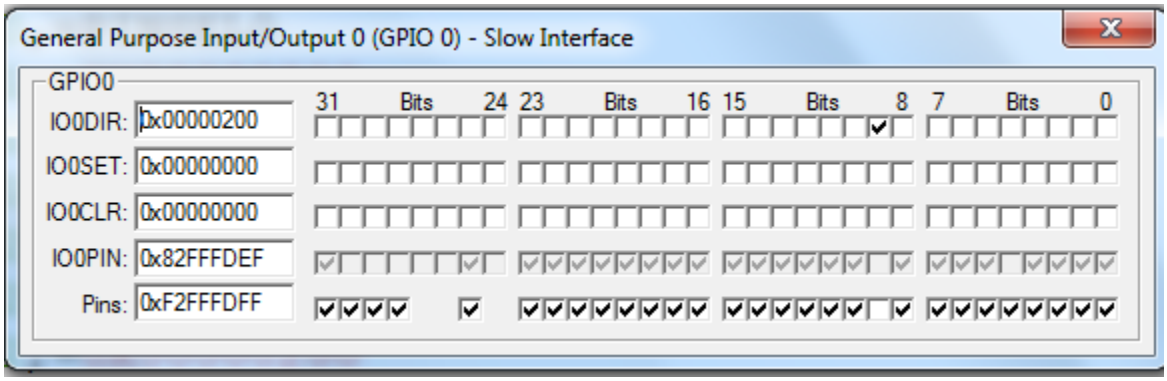
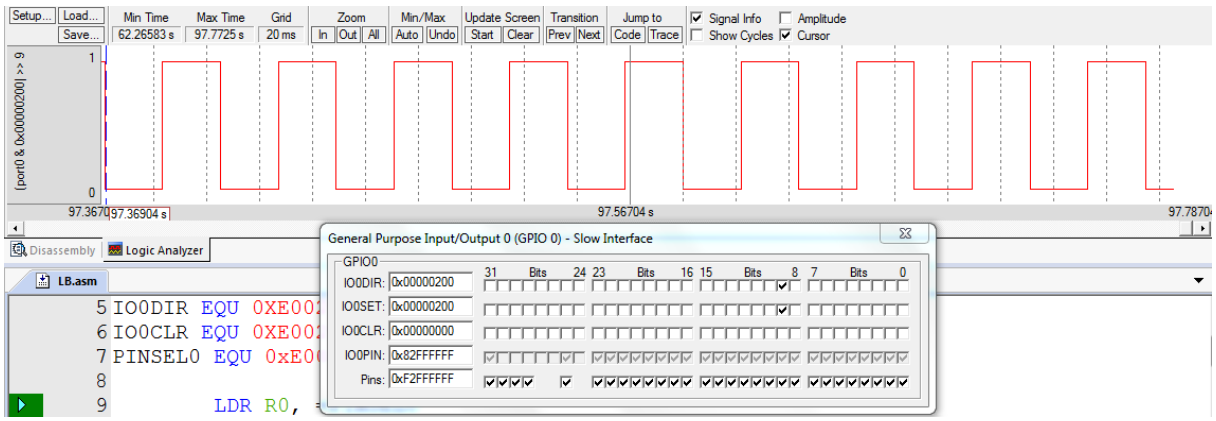
1 .WRITE AN ALP TO BLINKING LED WAVEFORM USING ASSEMBLY LANGUAGE

```
AREA GITAM, CODE, READONLY
        ENTRY
IO0PIN EQU 0XE0028000
IO0SET EQU 0XE0028004
IO0DIR EQU 0XE0028008
IO0CLR EQU 0XE002800C
PINSEL0 EQU 0xE002C000

        LDR R0, =PINSEL0
        LDR  R1, =0X00000000
        STR R1,[R0]
        LDR R0,=IO0DIR
        LDR R2,=0X00000200
        STR R2,[R0]
NEXT    LDR R2,=0X00000200
        LDR R0,=IO0SET
        STR R2,[R0]
        BL DELAY
        LDR R0,=IO0CLR
        STR R2,[R0]
        BL DELAY
```

```
        B       NEXT


DELAY  LDR R5,=0X0000FFFF
AGN    SUBS R5,R5,#0X01
       BNE AGN
       BX LR
           END
```

OUTPUT





2.WRITE AN ALP TO GENERATE SQUAREWAVE

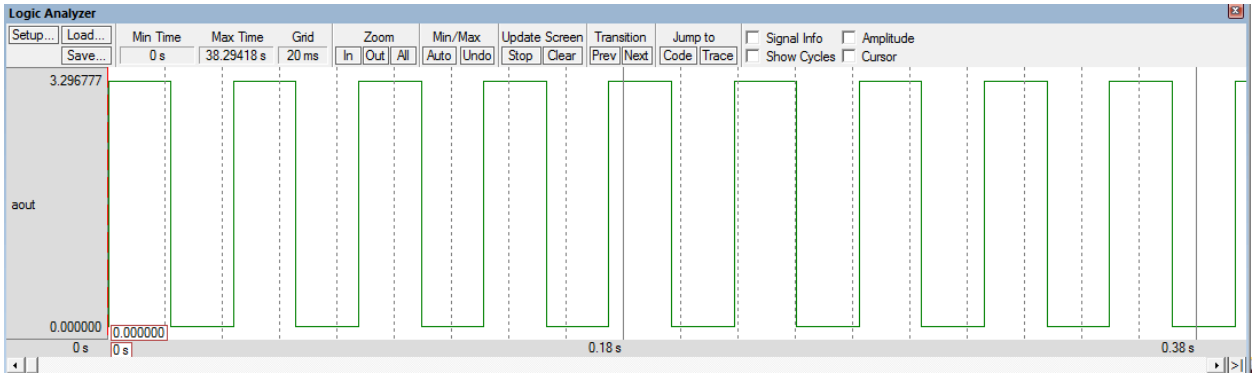
```
        AREA GITAM, CODE, READONLY
                ENTRY
PINSEL1 EQU 0XE002C004
DACR    EQU 0XE006C000

                LDR R1,=PINSEL1
                LDR R2,=0X00080000
                STR R2,[R1]
                LDR R0,=DACR
                LDR R2,=0X00000000
                LDR R3,=0X000003FF
BAK     LSL R1,R3,#6
                STR R1,[R0]
                BL DELAY
                LSL R1,R2,#6
                STR R1,[R0]
                BL DELAY
                B BAK

DELAY  LDR R5,=0X0000FFFF
AGN    SUBS R5,R5,#0X01
```

BNE AGN

BX LR

END

OUTPUT

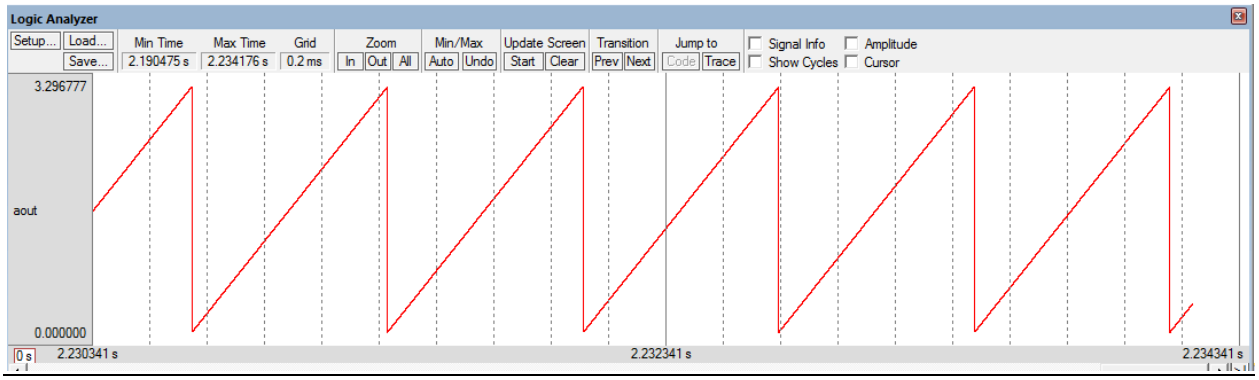


3.WRITE AN ALP TO GENERATE SAWTOOTH WAVEFORM

```
AREA GITAM, CODE, READONLY
        ENTRY
PINSEL1 EQU 0XE002C004
DACR    EQU 0XE006C000
        LDR R3,=0X0000003FF
        LDR R1,=PINSEL1
        LDR R2,=0X00080000
```

```
        STR R2,[R1]
        LDR R0,=DACR
BAK1    LDR R2,=0X00
BAK     LSL R1,R2,#6
        STR R1,[R0]
        ADD R2,R2,#1
        CMP R2,R3
        BLT BAK
        B   BAK1
        END
```

OUTPUT WAVEFORM



4.WRITE AN ALP TO GENERATE TRIANGLE WAVEFORM

```
        AREA GITAM, CODE, READONLY
        ENTRY
PINSEL1 EQU 0XE002C004
DACR    EQU 0XE006C000
        LDR R3,=0X0000003FF
        LDR R1,=PINSEL1
```

```
        LDR R2,=0X00080000
        STR R2,[R1]
        LDR R0,=DACR
   LDR R2,=0X00
BAK     LSL R1,R2,#6
        STR R1,[R0]
        ADD R2,R2,#1
        CMP R2,R3
        BLT BAK
BAK1  LSL R1,R2,#6
        STR R1,[R0]
        SUBS R2,R2,#1
        BNE   BAK1
        B BAK
        END
```

OUTPUT WAVEFORM