DS20613 - Assignment 2
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Question-1. Please find out the clock used in your Atmega328p.

Internally, Atmega-328P consists of 2 clocks namely

- Calibrated Internal RC Oscillator (8.0MHz)
- Internal 128 kHz RC Oscillator (128 kHz)

By default, inbuilt clock Source of Atmega328P is a Calibrated Internal RC Oscillator at 8.0MHz resulting in 1.0MHz system clock.
However, the following external sources can also be used as a clock in Atmega328P.

- Low Power Crystal Oscillator (~0.4 – 20MHz Ceramic/Crystal)
- Full Swing Crystal Oscillator (~0.4 – 20MHz Ceramic/Crystal)
- Low Frequency Crystal Oscillator (~32.768 kHz)
- External Clock (0 - 20 MHz)

These sources can be used by setting the CKSEL Fuses.

Question-2. What are timer registers available in Atmega328P and list their name.

There are 3-Timers available in Atmega328P namely

- 8-bit Timer/Counter0 with PWM
- 16-bit Timer/Counter1 with PWM
- 8-bit Timer/Counter2 with PWM

Registers associated with each Timers

8-bit Timer/Counter0 with PWM	**16-bit Timer/Counter1 with PWM**	**8-bit Timer/Counter2 with PWM and Asynchronous Operation**
Timer/Counter (TCNT0) Output Compare Registers (OCR0A/B) Timer Interrupt Flag Register (TIFR0) Timer Interrupt Mask Register (TIMSK0) Output Compare Flag (OCF0A/B) TCCR0A – Timer/Counter Control Register A	Timer/Counter (TCNT1) Output Compare Registers (OCR1A/B) Input Capture Register (ICR1) Timer/Counter Control Registers (TCCR1A/B/C) Timer Interrupt Flag Register (TIFR1) Timer Interrupt Mask Register (TIMSK1)	Timer/Counter (TCNT2) Output Compare Register (OCR2A/B) Timer Interrupt Flag Register (TIFR2) Timer Interrupt Mask Register (TIMSK2) Timer/Counter Control Registers (TCCR2A/B/C) Asynchronous Status Register (ASSR) General Timer/Counter Control Register (GTCCR)