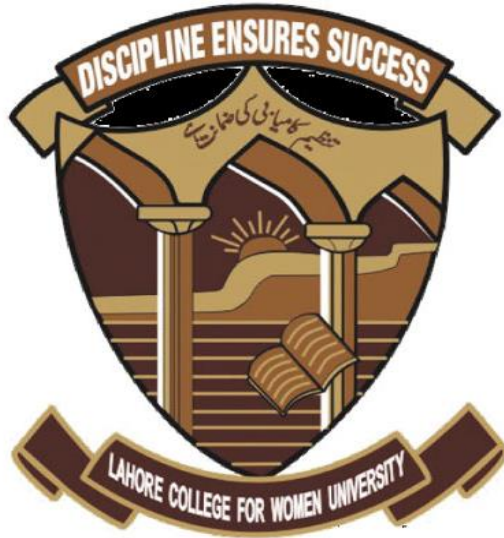


LAHORE COLLEGE FOR WOMEN UNIVERSITY



Subject: COAL

Department: Computer Science (BSCS-III)

Submitted To: Ma'am Fatima Anjum

Submitted By

Eishal Aamir (2125110015)

Arooj Abbas (2125110009)

Areeba Latif (2125110006)

Farah Batool (2125110017)

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Intel Core i3, i5, i7, i9

Introduction

Intel Core is a line of streamlined midrange consumer, workstation, and enthusiast computer central processing units (CPUs) marketed by Corporation. The Intel Core processors include the following processors.

- 1) *Intel Core i3*
- 2) *Intel Core i5*
- 3) *Intel Core i7*
- 4) *Intel Core i9.*

Core i3

Core i3 was developed and manufactured by **Intel**, and first introduced and released in **2010**, the Core i3 is a dual-core computer processor, available for use in both desktop and laptop computers. It is one of four types of processors in the "i" series (also called the Intel Core family of processors).

Figure 1 shows an intel core i3 processor.



Figure 1

Core i3 processors offer a great mix of price and performance. They are meant for the general day-to-day task. They aren't the best for heavy multitasking or more challenging tasks such as editing videos, but they offer a noticeable step up from Pentium processors without you having to spend too much more; you'll find them in laptops from about £350 and up. The Core i3 processor is available in multiple speeds, ranging from **1.30 GHz up to 3.50 GHz**, and features either **3 MB or 4 MB of cache**. The

most common type of **RAM** used with a Core i3 processor is **DDR3 1333** or **DDR3 1600**. Some laptops can be used for up to five or six hours on a single battery charge when running a Core i3 processor.

Core i5



The intel core i5 is manufactured by Intel, the Core i5 is a computer processor, available as dual-core or quad-core. It can be used in both desktop and laptop computers; hyper-threading is enabled in laptops, but hyper-threading is not enabled in desktop computers. The first i5 processor was released in **September 2009** and new generations of the i5 were released in **2020**. The **Intel Core i5 is an all-purpose processor** that provides better performance for **gaming, web browsing, and doing basic work**. The costs of the i5 are less than the i7.

The Core i5 processor is available in multiple speeds, ranging from **1.90 GHz up to 3.80 GHz**, and it features **3 MB, 4 MB, or 6 MB of cache**. It utilizes either the LGA 1150 or LGA 1155 socket on a motherboard. The i5 parts also generally have higher clock speeds, a larger cache, and can handle more memory.

Power usage varies for the Core i5 processors:

- Slower speeds (1.90 GHz to 2.30 GHz) use 11.5 W of power
- Medium speeds (2.60 GHz to 3.10 GHz) use 15 W, 25 W, 28 W, or 37 W of power
- Faster speeds (3.20 GHz to 3.80 GHz) use 35 W, 37 W, 45 W, 47 W, 65 W, or 84 W of power

Core i5 processors are commonly found in desktop computers for most everyday use and some higher performance needs. Some laptop computers feature Core i5 processors

as well, to provide improved performance for heavier usage needs. At **lower speeds**, battery usage is conservative and can reach up to **five hours** of usage on a single charge. However, **at higher speeds**, battery usage is higher and may result in up to **three hours** or so of usage per charge.

Core i7

Intel core i7 is a line of Intel chipsets that span eight generations. Intel core i7 comes with 4 cores and hyper trading which means four physical cores equals eight virtual cores that can deal with the extreme workload Intel could ever build. It comes with stock frequencies between 2.6 and 3.7 GHz. The cash memory of core i7 is also higher than core i5. The first i7 processors were released in November 2008 and new generations of the i7 continue to be released.

In June 2018, Intel announced a limited edition i7 processor, the i7-8086K, to commemorate the 40th anniversary of the 8086 CPU. Only 8086 of these processors were produced. It is the first Intel processor to reach speeds of 5 GHz without overclocking using Intel turbo boost technology.

Variations of the i7 processor are manufactured for a variety of personal computing devices. Some high-performance i7 processors for desktop computers, such as the i7-8700K, are unlocked for overclocking. High-efficiency i7 processors are manufactured for desktop computers, laptops, and mobile devices.

Intel core i7 is generally more expensive than core i3 and core i5. The i7 processor is marketed primarily to gaming, businesses, and digital artists such as filmmakers and animators.



Core i9

The Intel Core i9 is one of the most powerful Intel processors on the mainstream market. It's faster and smarter than existing CPUs because of its expanded multi-threading capacity and better power efficiency.



It's an optimal processor for your motherboard if you're trying to assemble a great gaming rig, or if you dabble in programs that require a wealth of computing power. For example, it's great if you do a lot of photo editing, digital video editing, music production, or digital animation, just to name a few.

The i9 has two models. The first is the 8th Generation i9-8950HK, which is already on the market. The second model, just released on October 19, is the 9th Generation i9-9900K.

Intel i9 is the 11th generation (Intel Core i9 processor). This processor features a performance hybrid architecture designed for intelligent performance-optimized creating and enhanced tuning to allow a gamer to game with up to 5.8 GHz clock speed. It is also known as Intel Core X-Series Processor.

A processor's main purpose is to read instructions, known as threads, and perform their dictated actions. The i9 CPU features Intel Hyperthreading technology. This enables each core to process two threads simultaneously for speedier performance. The 9th Generation i9 has eight cores, with two threads allocated to each core; the i9 can process 16 threads at once. That's a ton of processing speed, and that is why the core is great for gaming. It can handle the abundance of threads for lightning-fast gameplay.