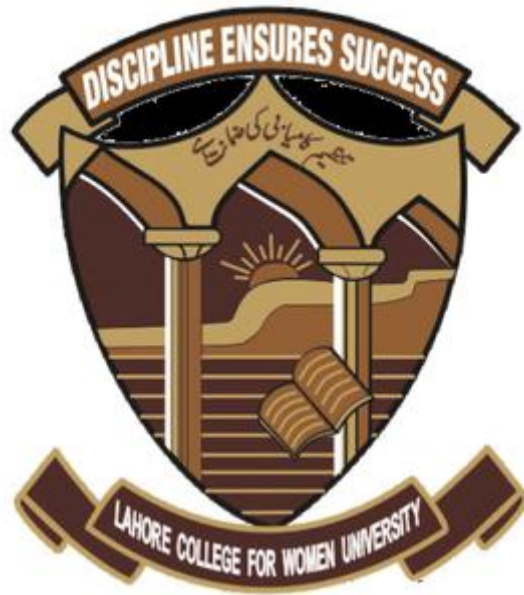# LAHORE COLLEGE FOR WOMEN UNIVERSITY

Department: COMPUTER SCIENCE (BSCS-III)

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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 dualcore 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 PROCESSOR

Core i5

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.

Figure 2 CORE I5 PROCESSOR

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 i7

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.**

Figure 3 CORE i7 PROCESSOR

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.

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.**

Figure 4 CORE i9 PROCESSOR

DIFFERENCES B/W CORE i3, i5, i7 & i9

SPECIALITIES	CORE i3	CORE i5	CORE i7	CORE i9
No. OF CORES	2-4	4-6	6-8	8
TURBO BOOST	NO	YES	YES	YES
CACHE	3-4 MB	3-8 MB	4-8 MB	16 MB