* Sector 0 was occupied by the Protective MBR.
* Sector 1 was occupied by the Primary GPT Header.
* Sector 2 will be occupied by the Partition Entry Array.
* There are a total of 128 partitions on a GPT disk, and this partition entry array contains information about all these partitions.
* Each partition entry is represented by 128 bytes.
* So, there are a total of 32 sectors that will have the partition information. If the number of partitions is less than the 128 partitions, then the rest of the 128\*x bytes will be filled with zeroes.

28 73 2A C1 1F F8 D2 11 BA 4B 00 A0 C9 3E C9 3B

EE 7E 30 99 70 E1 98 42 B5 5E E8 21 8E AD 24 B5

00 08 00 00 00 00 00 00 FF 47 1F 00 00 00 00 00

00 00 00 00 00 00 00 00 45 00 46 00 49 00 20 00

73 00 79 00 73 00 74 00 65 00 6D 00 20 00 70 00

61 00 72 00 74 00 69 00 74 00 69 00 6F 00 6E 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

All the group of bytes in the partition entry array of the GPT have specific meanings:

1. **PARTITION TYPE GUID:** The GUID indicates the partition type. They are stored with the mixed little-endian format. To fix this we can:

28 73 2A C1 1F F8 D2 11 BA 4B 00 A0 C9 3E C9 3B

Reverse first 4 bytes: C1 2A 73 28

Reverse next 2 bytes: F8 1F

Reverse next 2 bytes: 11 D2

Keep next 2 bytes as it is: BA 4B

Keep next 6 bytes as it is: 00 A0 C9 3E C9 3B

This GUID appears as: **C12A7328- F81F-11D2-BA4B-00A0C93EC93B**

1. **UNIQUE PARTITION GUID:** Unique Partition GUID is used to distinguish partitions on a disk. It is a unique GUID that is given to all the partitions on the disk. They follow the same conversion steps as partition type GUID.

Similarly, for this GUID: EE 7E 30 99 70 E1 98 42 B5 5E E8 21 8E AD 24 B5

Reverse first 4 bytes: 99 30 7E EE

Reverse next 2 bytes: E1 70

Reverse next 2 bytes: 42 98

Keep next 2 bytes as it is: B5 5E

Keep next 6 bytes as it is: E8 21 8E AD 24 B5

This unique GUID appears as: **99307EEE-E170-4298-B55E- E8218EAD24B5**

1. **STARTING LBA:** Indicates the sector from where this partition starts on the disk. The bytes in this place look like 00 08 00 00 00 00 00 00. All this data is in little-endian. After converting this hexadecimal data to decimal, we get 2048. This means that this partition starts from sector number 2048.
2. **ENDING LBA:** Indicates the sector at which this partition is ending on the disk. The bytes in this place look like FF 47 1F 00 00 00 00 00. Again, all this data is in little-endian which when converted from hexadecimal to decimal, results to 2050047. Meaning, that the partition ends at sector 2050047.
3. **ATTRIBUTES:** Flags that tell whether the partition is bootable, hidden or normal. The bytes are like 00 00 00 00 00 00 00 00. These 8 bytes are a total of 64 bits. 1 byte = 8 bits.
4. Bit 0: Indicates that the partition is required by the platform to function properly.
5. Bit 1: Specifies that the EFI firmware should ignore the content of the partition and not attempt to read from it.
6. Bit 2: Marks the partition as bootable in legacy BIOS systems.
7. Bit 3-47: Reserved for future use.
8. Bit 48: Marks the partition as read-only. This prevents any modifications to the partition's contents.
9. Bit 49: Indicates that the partition is a shadow copy or backup.
10. Bit 50: Hides the partition from the operating system, making it invisible to users.
11. Bit 51: Prevents the operating system from automatically mounting the partition.
12. Bits 52-63: Reserved for use by the partition type or future extensions.
13. **PARTITION NAME:** It represents the name of the partition in string format and is UTF-16 encoded. When the data of the last 72 bytes is passed through a hexadecimal to a text convertor, the data we get for this particular partition is:

EFI system partition