

morning session

Date - 19/6/2020

Course - C programming

Topic - Structures &

unions

Repository - Rashmi.k

Name - Rashmi

USN - UAL18EC043

Sem - IV Sem.

Report:Today's - topic \Rightarrow Structures
Unions

- Structure is user defined data type that groups related variables of different data type.

```
struct course {
```

```
    int id;
```

```
    char title [40];
```

```
    float hours;
```

```
}
```

- Unions \Rightarrow

- A union allows to store different data types in the same memory location.

- union declaration uses the keyword union.

```
union val {
```

```
    int int-num;
```

```
    float fl-num;
```

```
    char str[20];
```

```
}
```

Afternoon session

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Topic - memory
 structure

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Report -

Today's Topic =>
Memory management.

- * When you declare a variable using a basic data type, C automatically allocates space for the variable in area of memory called stack

```
int x;
```

```
printf("%d", sizeof(x)); /* output: 4 */
```

- * Dynamic memory allocation is the process of allocating & freeing memory as needed

- * malloc() function allocates a specified number of contiguous bytes in a memory.

```
#include <stdlib.h>
```

```
int *ptr;
```

```
/* a block of 10 ints */
```

```
ptr = malloc(10 * sizeof(*ptr));
```

```
if (ptr != NULL) {
```

```
    *(ptr + 2) = 50;
```

```
}
```