**DS LAB ASSIGNMENT 1**

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**ROLL NO.-F 32**

QUESTION-

Write a code to differentiate between primitive and non primitive data types and their memory allocation.

CODE-

#include<stdio.h>

struct abc{

int a;

int arr[5];

char str[5];

};

union def{

int b;

int arr2[5];

char str2[5];

};

main(){

/\*primitive data type=integer,float etc.

non primitive data type=array,string\*/

struct abc s1;

union def u1;

int c;

int arr3[5];

char str3[5];

int \*p1,\*p2,\*p3,\*p4,\*p5,\*p6;

char \*p7,\*p8,\*p9;

p1=&s1.a;

p2=&s1.arr;

p3=&u1.b;

p4=&c;

p5=&arr3;

p6=&u1.arr2;

p7=&s1.str;

p8=&u1.str2;

p9=&str3;

printf("The address of int variable is:%d %u %x",p4,p4,p4);

printf("\nThe address of array is:%d %u %x",p5,p5,p5);

printf("\nThe address of atring is:%d %u %x",p9,p9,p9);

printf("\nThe address of structure int is:%d %u %x",p1,p1,p1);

printf("\nThe address of union int is:%d %u %x",p3,p3,p3);

printf("\nThe address of structure array is:%d %u %x",p2,p2,p2);

printf("\nThe address of union array is:%d %u %x",p6,p6,p6);

printf("\nThe address of structure string is:%d %u %x",p7,p7,p7);

printf("\nThe address of union string is:%d %u %x",p8,p8,p8);

}

OUTPUT-

