

| **TITLE:**  Dynamic Memory Allocation. |
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**AIM:** Program to demonstrate dynamic memory allocation using malloc() & free () function.

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**Expected OUTCOME of Experiment:**

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**Books/ Journals/ Websites referred:**

1. Programming in C, second edition, Pradeep Dey and Manas Ghosh, Oxford University Press.
2. Programming in ANSI C, fifth edition, E Balagurusamy, Tata McGraw Hill.
3. Introduction to programming and problem solving , G. Michael Schneider ,Wiley India edition.
4. [**http://cse.iitkgp.ac.in/~rkumar/pds-vlab/**](http://cse.iitkgp.ac.in/~rkumar/pds-vlab/)

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**Problem Definition:**

Implementing a C program to create a student list of a class using Dynamic memory allocation. It will have the details of students as roll number and name. Program should support the following operations (menu driven).

1. Insert

2. Delete

3. Display

use malloc for insert and free for delete

**Algorithm:**

**Implementation details:**

**Output(s):**

**Conclusion:**

**Post Lab Descriptive Questions**

1. **What is the difference between malloc and calloc?**
2. **Consider the following C code. What will be the output?**

# include<stdio.h>

# include<stdlib.h>

void fun(int \*a)

{

  a = (int\*)malloc(sizeof(int));

}

int main()

{

  int \*p;

  fun(p);

  \*p = 6;

  printf("%d\n",\*p);

  return(0);

}

(A) Compiler Error

(B) 6

(C) Runtime Error

(D) Garbage Value

1. **Difference between Static and Dynamic Memory allocation**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Signature of faculty in-charge**