

**DAYANANDASAGAR COLLEGE OF ARTS SCIENCE AND COMMERCE**

Shavige Malleshwara Hills, Kumaraswamy Layout, Bangalore-560082

Internal Quality Assurance Cell (IQAC) Cell

Guest Lecture on

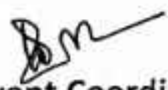
**"Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs"**

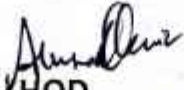
Department: BCA

Date: 26-09-2024

| Sl. No. | Particulars               | Event related Details                                                                                                                                                                                                                                                 |    |           |  |
|---------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----------|--|
| 1.      | Event*                    | Guest Lecture                                                                                                                                                                                                                                                         |    |           |  |
| 2.      | Title of the Event        | Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs                                                                                                                                                                                             |    |           |  |
| 3.      | Date                      | 26-09-2024                                                                                                                                                                                                                                                            |    |           |  |
| 4.      | Time                      | 09.30 AM to 11.00 AM                                                                                                                                                                                                                                                  |    |           |  |
| 5.      | Venue                     | Seminar Hall, Department of computer applications                                                                                                                                                                                                                     |    |           |  |
| 6.      | Resource Person 1 Details | Dr. Sangeetha G<br>Associate professor,<br>Department of Computer Science,<br>Christ University                                                                                                                                                                       |    |           |  |
| 7.      | Topics Covered            | Optimization Techniques, Resource allocation graph, Case study for optimization Techniques                                                                                                                                                                            |    |           |  |
| 8.      | Resource Person 2 Details | NA                                                                                                                                                                                                                                                                    |    |           |  |
| 9.      | Topics Covered            | NA                                                                                                                                                                                                                                                                    |    |           |  |
| 10.     | No. Faculty Participants  | Internal:                                                                                                                                                                                                                                                             | 01 | External: |  |
| 11.     | No. Student Participants  | Internal:                                                                                                                                                                                                                                                             | 84 | External: |  |
| 12.     | Faculty Coordinator/s     | Name: Dr. Aruna Devi C<br>Designation: Associate Professor & HOD -BCA<br>Department: Dept. of Computer Applications, DSCASC<br><br>Full Name: Prof. T. Kohila Kanagalakshmi<br>Designation: Assistant Professor<br>Department: Dept. of Computer Applications, DSCASC |    |           |  |
| 13.     | Student Coordinator/s     | Full Name: Regno: Mr. Shivraj Singh (U03CJ23S0097)<br>Course, Semester & Section: III BCA 'B' Section                                                                                                                                                                 |    |           |  |

| Sl. No. | Particulars                                 | Event related Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14.     | Total Expenditure                           | 3,000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 15.     | Sponsors and Amount (if any)                | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 16.     | Program Schedules of the event Attached?    | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 17.     | Report uploaded on college website ?        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 18.     | Report sent to media? If yes, give details: | NO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 19.     | Report uploaded in Social Media?            | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 20.     | Certificates Printed?                       | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 21.     | Feedback Collected?                         | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 22.     | Attendance Sheet Attached? #                | Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 23.     | Summary of the Event                        | <p>Department of Computer Applications - BCA (BU), DSCASC organized a guest lecture on "Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs".</p> <p>The guest lecture on "Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs" provided valuable insights into managing system resources effectively. The speaker explained how Resource Allocation Graphs (RAGs) can help prevent deadlocks by visually representing the relationship between processes and resources. By analysing these graphs, system administrators can identify potential bottlenecks and optimize resource allocation. The Speaker emphasized the importance of proactive resource management in enhancing system performance through a case study of hospital management, ensuring stability, and minimizing inefficiencies in complex environments.</p> |
| 24.     | Photographs of the Event                    | Attached                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

  
Event Coordinator

  
HOD

  
IQAC Coordinator  
Dayananda Sagar College of Arts,  
Science & Commerce  
Kumara Sany Layout, Bengaluru - 560 111

  
Principal





**DAYANANDA SAGAR COLLEGE OF ARTS,  
SCIENCE & COMMERCE**

**INTERNAL QUALITY ASSURANCE CELL (IQAC)**

**Department Of Computer Applications - BCA**

**Guest Lecture  
On**

**Optimizing System Efficiency :**

**A Deep Dive Into Resource Allocation Graphs**



**Dr. Sangeetha G  
Associate Professor,  
Department of computer Science,  
Chirst University,  
Banglore Central campus,  
Banglore 560029**

**Date: 26 September 2024**

**Time: 09 : 30 to 10 : 30 AM**

**Venue: Seminar Hall**

**SHAVIGE MALLESHWARA HILLS, KUMARSWAMY LAYOUT,  
BENGALURU**

[www.dscasc.edu.in](http://www.dscasc.edu.in)

# **DAYANANDASAGAR COLLEGE OF ARTS SCIENCE AND COMMERCE**

**Shavige Malleshwara Hills, Kumaraswamy Layout, Bangalore-560082**

**Internal Quality Assurance Cell (IQAC) Cell**

**Guest Lecture on**

**“Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs”**

**Department: BCA**

**Date: 26-09-2024**

## **Program Schedule**

|           |                             |                 |
|-----------|-----------------------------|-----------------|
| <b>1.</b> | <b>Welcome Speech</b>       | <b>9.30 AM</b>  |
| <b>2.</b> | <b>Speaker Introduction</b> | <b>9.35 AM</b>  |
| <b>3.</b> | <b>Technical Talk</b>       | <b>9.40 AM</b>  |
| <b>4.</b> | <b>Q&amp;A Session</b>      | <b>10.45 AM</b> |
| <b>5.</b> | <b>Vote of Thanks</b>       | <b>10.55 AM</b> |



# DAYANANDASAGAR COLLEGE OF ARTS SCIENCE AND COMMERCE

Shavige Malleshwara Hills, Kumaraswamy Layout, Bangalore-560082

Internal Quality Assurance Cell (IQAC) Cell

Guest Lecture on

**"Optimizing System Efficiency: A Deep Dive into Resource Allocation Graphs"**

Department: BCA

Date: 26-09-2024



1. Speaker introducing the topic



2. Explanation for Resource allocation graph



**3. Students Participation**



**4. Speaker explaining the concept of deadlock**





##### 5. Case study – Hospital management – Optimization Technique



##### 6. Students participation in the case study

**DAYANANDA SAGAR COLLEGE OF ARTS, SCIENCE AND COMMERCE**  
**Department of Computer Applications - BCA**  
**GUEST LECTURE "Optimizing System Efficiency: A Deep Dive Into Resource Allocation Graphs"**

Date: 26.09.2024

Course : BCA III Semester

| SL. NO. | REG. NO.         | STUDENTS NAME                  | SIGNATURE      |
|---------|------------------|--------------------------------|----------------|
| 1       | U03CJ23S0118 'B' | Vijaya Chinnayji V-S           | Vijaya         |
| 2       | U03CJ23S0066 'B' | Prasanna K.V                   | Prasanna       |
| 3       | U03CJ23S0005 'A' | Adithya Shankar                | Adithya        |
| 4       | U03CJ23S0011 'A' | Bharath A                      | Bharath        |
| 5       | U03CJ23S0032 'A' | Febin T                        | Febin          |
| 6       | U03CJ23S0097 'B' | Shirraj Singh                  | Shirraj        |
| 7       | U03J2320071 'B'  | Pratik Kumar                   | Pratik Kumar   |
| 8       | U03CJ23S0090 'B' | H. Sai Srujan                  | H. Sai Srujan  |
| 9       | U03CJ23S0009 'A' | Bavan P                        | Bavan P        |
| 10      | U03CJ23S0020 'B' | Baloon Kumar 'N'               | Baloon Kumar   |
| 11      | U03CJ23S0092 'B' | SANJAY S                       | Sanjay S       |
| 12      | U03CJ23S0093 'B' | SARVIND YADAV                  | Sarvind Yadav  |
| 13      | U03CJ23S0082 'B' | Ritesh Raj                     | Ritesh Raj     |
| 14      | U03CJ23S0067 'B' | Pranav N.S                     | Pranav         |
| 15      | U03CJ23S0063 'B' | Rishanth Kumar                 | Rishanth       |
| 16      | U03CJ23S0069 'B' | Pranav                         | Pranav         |
| 17      | U03CJ23S0031 'A' | E.V. Shalank goud              | Shalank        |
| 18      | U03CJ23S0016 'A' | C.H. Gagandeep                 | Gagandeep      |
| 19      | U03CJ23S0080 'B' | Rasiteja Naidu. A              | Rasiteja       |
| 20      | U03CJ23S0027 'A' | D. Sathya Riva Yashwanth Kumar | D. Sathya Riva |
| 21      | U03CJ23S0048 'A' | Sathish Reddy                  | Sathish        |
| 22      | U03CJ23S0028 'A' | Deepak Venkata Karishma. D     | Deepak         |
| 23      | U03CJ23S0007 'A' | Aryan S                        | Aryan S        |
| 24      | U03CJ23S0043 'A' | KARTHIK. P. B                  | Karthik        |
| 25      | U03CJ23S0052 'A' | Wazir Mujimi                   | Wazir          |
| 26      | U03CJ23S0120 'B' | Vinesh K                       | Vinesh         |
| 27      | U03CJ23S0115 'B' | Vijeth                         | Vijeth         |
| 28      | U03CJ23S0070 'B' | Prashanth Raj                  | Prashanth      |
| 29      | U03CJ23S0046 'A' | Kushal K                       | Kushal K       |





| SL. NO. | REG.NO.            | STUDENTS NAME      | SIGNATURE       |
|---------|--------------------|--------------------|-----------------|
| 30      | Gnyanesh. S. Sagar |                    |                 |
| 30      | U03CJ2350035 'A'   | Gnyanesh. S. Sagar | Gnyanesh. S.    |
| 31      | U03CJ2350044 'A'   | Darshan Gowda. K   | Darshan         |
| 32      | U03CJ2350018 'A'   | Chandan. A         | Chandan         |
| 33      | U03CJ2350025 'A'   | DARSHAN K.O        | Darshan         |
| 34      | U03CJ2350096 'B'   | Shashwath          | Shashwath       |
| 35      | U03CJ2350033 'A'   | Pavan G            | Pavan           |
| 36      | U03CJ2350108 'B'   | SD. Hussain Basha  | SD. Basha       |
| 37      | U03CJ2350020 'A'   | C. Hemanth         | C. Hemanth      |
| 38      | U03CJ2350022 'A'   | D. Jayadev         | D. Jayadev      |
| 39      | U03CJ2350075 'B'   | R. Pradeep         | R. Pradeep      |
| 40      | U03CJ2350055 'A'   | Mohan Singh        | Mohan Singh     |
| 41      | U03CJ2350062 'B'   | NEHA               | NEHA            |
| 42      | U03CJ2350098 'B'   | Shreya Lakshmi     | Shreya Lakshmi  |
| 43      | U03CJ2350010 'A'   | BEENU SHUKLA       | BEENU SHUKLA    |
| 44      | U03CJ2350037 'A'   | Ziya Jathima       | Ziya Jathima    |
| 45      | U03CJ2350015 'A'   | Bhuvan. SH         | Bhuvan. SH      |
| 46      | U03CJ2350040 'A'   | Jeevan. R          | Jeevan. R       |
| 47      | U03CJ2350004 'A'   | 'Abith KUMAR. M    | 'Abith KUMAR. M |
| 48      | U03CJ2350050 'A'   | Manojkumar. V      | Manojkumar. V   |
| 49      | U03CJ2350056 'A'   | Monish. S          | Monish. S       |
| 50      | U03CJ2350034 'A'   | Crish. A           | Crish. A        |
| 51      | U03CJ2350054 'A'   | Mohd Bilal Khun    | Bilal           |
| 52      | U03CJ2350053 'A'   | Alfiaz             | Alfiaz          |
| 53      | U03CJ2350039 'A'   | Jaffar             | Jaffar          |
| 54      | U03CJ2350076 'B'   | Radha Sinha        | Radha           |
| 55      | U03CJ2350102 'B'   | Somya Rani Nayak   | Somya Rani      |
| 56      | U03CJ2350003 'B'   | Subhangi Roy       | Subhangi        |
| 57      | U03CJ2350107 'B'   | Swathi. B          | Swathi. B       |
| 58      | U03CJ2350038 'A'   | Pujitha. J         | Pujitha. J      |





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| REG.NO.              | STUDENTS NAME  | SIGNATURE      |
|----------------------|----------------|----------------|
| 1. B                 |                |                |
| 54 U03CJ2350064 'B'  | Palak Jangir   | Palak          |
| 55 U03CJ2350052 'A'  | Mohamad Shahid | Shahid         |
| 56 U03CJ2350008 'A'  | Ayush Rai      | Ayush          |
| 57 U03CJ2350026 'A'  | Darshan Rajar  | Darshan        |
| 58 U03CJ2350085 'B'  | Ruchitha . B.S | Ruchitha . B.S |
| 59 U03CJ2350086 'B'  | Niveditha . S  | Niveditha      |
| 58 U03CJ2350002 'A'  | Aaradhya . N.G | Aaradhya       |
| 59 U03CJ2350047 'A'  | Lisha . M      | Lisha          |
| 60 U03CJ2350013 'A'  | Bhoomika . B.  | Bhoomika       |
| 61 U03CJ2350058 'A'  | Namratha       | Namratha       |
| 62 U03CJ23500100 'B' | Sidha stifa    | Sidha          |
| 63 U03CJ2350074 'B'  | Keerthana . R. | Keerthana      |
| 64 U03CJ2350021 'A'  | D. Harshitha   | D. Harshitha   |
| 65 U03CJ2350017 'A'  | CH. Trisha     | CH. Trisha     |
| 66 U03CJ2350057 'A'  | Manasvi . NL   | Manasvi        |
| 67 U03CJ2350041 'A'  | Jyotsna Banur  | Jyotsna        |
| 68 U03CJ2350117 'B'  | Vaarus Shetty  | Vaarus Shetty  |
| 69 U03CJ2350091 'B'  | Sandesh BM     | Sandesh        |
| 70 U03CJ23500114 'B' | V. Gantham     | V. Gantham     |
| 71 U03CJ2350089 'B'  | Sai Roshan     | Sai Roshan     |
| 72 U03CJ2350068 'B'  | Prakruthi B    | Prakruthi      |
| 73 U03CJ2350084 'B'  | Rohith S       | Rohith         |
| 74 U03CJ2350116 'B'  | Varshitha G    | Varshitha      |
| 75 U03CJ2350049 'B'  | Shrutha . K    | Shrutha        |
| 76 U03CJ2350083 'B'  | Rohang Patel   | Rohang         |
| 78 U03CJ2350087 'B'  | Tejashree      | Tejashree      |
| 79 U03CJ2350065 'B'  | Parinith . S   | Parinith       |
| 80 U03CJ2350110 'B'  | Tauqeer Rahim  | Tauqeer        |
| 81 U03CJ2350109 'B'  | Tanukhree . G  | Tanukhree      |







(Operating - System)  
Optimizing System Efficiency.

Title:- Resource Allocation Graph.

Name:- Niveditha.S

Reg no:- U03CJ23S0086

CLASS:- BCA-3<sup>rd</sup>sem 'B' sec

Date:- 26/09/24

SUB:- Feedback on the Workshop.

The session was conducted by Smt. Sangeetha, who spoke about resource allotment concerning around Deadlock. The workshop was very efficient and informative with student based activity at the end. The session also spoke about starvation and how to resolve deadlocks with efficient resource allocation.

In summary, the session was very effective and efficient with insight into efficient resource allocation while also considering deadlock and starvation.

Niveditha  
Student Signature





Operating - System)  
Optimizing System Efficiency  
Title: Resource Allocation Graph

Name: Shubhangi Roy

Reg No: U03CJ2350103

Class: BCA - III<sup>rd</sup> (B)

Date: 26/9/24

Subject: Feedback on workshop

The session about optimizing system efficiency was very much informative as well as well-organized, explanation about starvation and Deadlocks along with that we also had an activity on real-life example on Resource Utilization and how to manage <sup>with the</sup> minimum resources.

In Summary, the session was overall amazing and provided us with great insights.



  
Student Signature