



**St. Philomena's College (Autonomous)  
Mysore - 570015**

**Report on**  
Intensive In-House Internship on  
**“COMPUTER APPLICATION”**

**Organized by**  
M.Sc Computer Science Department  
St. Philomena's College (Autonomous), Mysore

**Internship Details**  
**Date:** 2<sup>nd</sup> April – 8<sup>th</sup> April  
**Time:** 9:30 AM – 4:30 PM  
**Venue:** St. Philomena's College (Autonomous),  
Post Graduation Mysore

**Resource Person**  
Mr. Hanock A  
Assistant Professor  
Dept. MSC Computer Science

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## Inauguration of In-House Internship Program for 6<sup>th</sup> Semester Students







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## **REPORT ON THE “7days In-house Internship on “COMPUTER APPLICATION”**

### **COURSE DESCRIPTION:**

#### **HTML (Hypertext Markup Language)**

**Course Description:** This course introduces students to HTML (Hypertext Markup Language), the standard language for creating web pages. The course covers fundamental topics such as structure and syntax of HTML, elements, attributes, and tags. Students will learn to create static web pages using HTML and understand the basics of web design principles. Additionally, the course explores advanced concepts like HTML5 semantic elements, multimedia embedding, and responsive design techniques. By the end of the course, students will be able to build, format, and structure web pages that can be viewed across different browsers and devices.

#### **Office Automation and Information Technology**

**Course Description:** This course provides an introduction to office automation tools and information technology fundamentals. Students will learn to use essential office productivity software such as word processors, spreadsheets, presentation software, and email management tools. The course also covers topics in information technology (IT) including hardware, software, operating systems, and networking concepts. Key modules include document formatting, data analysis using spreadsheets, preparing presentations, and collaboration tools. Students will develop the technical skills necessary for efficient office operations and gain a solid foundation in IT for professional and personal productivity.

#### **Data Warehousing**

**Course Description:** The Data Warehousing course explores the principles and practices involved in managing large-scale data repositories, designed for analytical processing. Students will be introduced to the architecture, design, and implementation of data warehouses. Topics include data modeling, ETL (Extract, Transform, Load) processes, OLAP (Online Analytical Processing), data mining, and performance tuning. The course emphasizes real-world applications of data warehousing techniques to store and analyze large amounts of business data, facilitating decision-making processes. Students will also gain an understanding of the integration of data from various sources into a central repository, and the role of data warehousing in business intelligence systems.

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## Database Management Systems (DBMS)

**Course Description:** This course provides an in-depth understanding of database management systems (DBMS), focusing on the design, development, and management of databases. Topics include relational databases, data models, normalization, SQL (Structured Query Language), transaction management, indexing, and database security. Students will learn how to design efficient database structures, perform complex queries, and ensure the integrity and consistency of data in a multi-user environment. The course also covers advanced DBMS concepts like distributed databases, cloud databases, and No SQL technologies. Practical exercises involve working with popular DBMS platforms like MySQL, PostgreSQL, and Oracle.

## OBJECTIVES OF THE INTERNSHIP IN COMPUTER SCIENCE

An internship in computer science provides students with hands-on experience and practical knowledge in the field of technology. The primary objectives of such an internship include:

### 1. Application of Theoretical Knowledge:

- Enable students to apply the concepts, theories, and techniques learned in their academic courses to real-world projects and problems.
- Develop a deeper understanding of various computer science topics such as programming, software development, algorithms, and systems analysis.

### 2. Skill Development:

- Enhance technical skills in programming languages (e.g., Python, Java, C++) and tools used in the industry.
- Gain proficiency in software development practices, debugging, and problem-solving.
- Learn about industry-standard software, frameworks, and tools, including version control (e.g., Git), databases, and integrated development environments (IDEs).

### 3. Exposure to Industry Practices:

- Provide insights into the workflow, practices, and methodologies used in the tech industry (e.g., Agile, Scrum, DevOps).
- Understand the software development life cycle (SDLC) and work collaboratively within a development team.

### 4. Communication and Collaboration:

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- Improve interpersonal and professional communication skills, particularly in presenting ideas and collaborating with peers and mentors.
  - Work in a team environment to solve problems, contribute to project development, and engage in code reviews.

**5. Problem Solving and Critical Thinking:**

- Encourage independent thinking by tackling real-world challenges and providing innovative solutions.
- Develop strong analytical skills and enhance the ability to break down complex problems into manageable components.

**6. Networking and Professional Growth:**

- Foster professional relationships with industry mentors, colleagues, and other professionals in the field.
- Gain exposure to potential employers and explore career opportunities in the computer science and technology sectors.

**7. Exposure to Emerging Technologies:**

- Gain experience with cutting-edge technologies like artificial intelligence (AI), machine learning (ML), block chain, data science, and cloud computing.
- Develop an understanding of current trends and innovations in the technology industry.

**8. Career Exploration and Focus:**

- Help students explore various career paths in computer science, such as software development, systems administration, data analysis, and cyber security.
- Assist students in determining their area of interest or specialization within computer science.

**9. Portfolio Development:**

- Allow students to work on projects that can be added to their personal portfolios, showcasing their technical skills and achievements to future employers.
- Build a solid track record of real-world projects that demonstrate competence in computer science and technology.

**10. Feedback and Improvement:**

- Receive constructive feedback from supervisors and mentors to improve technical abilities and professional conduct.



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## IDENTIFY STRENGTHS AND AREAS OF IMPROVEMENT, WHICH CAN HELP IN MAKING INFORMED DECISIONS ABOUT FURTHER CAREER DEVELOPMENT OR ACADEMIC FOCUS.

### CHOICE OF WORKPLACE FOR INTERNSHIP IN COMPUTER SCIENCE

Choosing the right workplace for an internship in computer science is crucial for gaining valuable experience, skill development, and career progression. The ideal workplace depends on various factors such as the type of experience you're looking for, the skills you want to develop, and the overall career path you intend to follow. Below are some key considerations to guide you in selecting the right workplace for your computer science internship:

#### 1. Type of Organization:

- **Tech Companies (Startups, Mid-size, or Large Enterprises):**
  - **Why choose:** Tech companies offer exposure to cutting-edge technologies, software development practices, and large-scale projects. Interns often work on real-world problems and collaborate with professionals in areas such as AI, machine learning, cloud computing, and cyber security.
  - **Example:** Google, Microsoft, Amazon, small local tech startups, or established software firms.
- **Software Development Agencies:**
  - **Why choose:** These agencies often work on a variety of projects for clients in different industries. It's a great place to get hands-on experience with client-oriented solutions, agile methodologies, and multi-faceted software development.
  - **Example:** Agencies that specialize in web development, app development, or custom software solutions.
- **Research Labs/Institutes:**
  - **Why choose:** If you're interested in the academic or research side of computer science, internships at research labs offer opportunities to engage in cutting-edge research in areas like artificial intelligence, data science, robotics, and cyber security.
  - **Example:** University research labs or private tech research organizations.
- **Financial or Healthcare Organizations:**
  - **Why choose:** Many large financial and healthcare institutions require computer science professionals for data analysis, software systems development, and security solutions. Interning in these sectors can provide exposure to highly specialized software applications and data-driven decision-making.

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- **Example:** Banks (e.g., JPMorgan), healthcare institutions (e.g., Mayo Clinic), or insurance firms (e.g., Allianz).

## **PROFILE OF THE WORKPLACE: ST. PHILOMENA'S AUTONOMOUS COLLEGE, MYSORE**

**Institution Overview:** St. Philomena's Autonomous College, Mysore, is a renowned educational institution that offers a diverse range of undergraduate and postgraduate programs in arts, sciences, commerce, and computer science. It is an autonomous college, which gives it the flexibility to design its curriculum and academic structure while adhering to quality education standards set by the University Grants Commission (UGC) and affiliating universities.

The college is located in the heart of Mysore and is known for its academic excellence, infrastructural facilities, and vibrant campus life. The Computer Science department at St. Philomena's Autonomous College is well-regarded for providing both theoretical and practical knowledge in the rapidly evolving field of technology.

## **ORGANIZATIONAL STRUCTURE FOR AN INTERNSHIP PROGRAM.**

### **1. Intern:**

- Responsible for completing tasks, learning, and contributing to projects. Works closely with supervisors and mentors for guidance and feedback.

### **2. Supervisor (Internship Manager/Team Lead):**

- Oversees the intern's day-to-day work, assigns tasks, and provides performance feedback. Ensures learning objectives are met.

### **3. Mentor:**

- Offers guidance on career development, technical skills, and workplace integration. Provides informal support and advice.

### **4. Internship Program Coordinator/HR Team:**

- Manages the internship process, including recruitment, on boarding, and administrative tasks. Ensures smooth integration of the intern into the company.

### **5. Department/Team:**

- The specific team or department (e.g., software development or data science) the intern works in. Provides the intern with tasks and projects related to their field.



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## 6. Senior Management (Optional):

- Occasionally interacts with interns for presentations or evaluations. Ensures the internship aligns with organizational goals.

## 7. Peer Interns:

- Other interns who work alongside and collaborate with the intern on related projects.

# NATURE AND MODE OF INTERNSHIP WORK

The nature and mode of internship work depend on the specific goals of the internship, the organization, and the field of study. In the context of a **Computer Science Internship**, the work generally follows one of the following formats:

## 1. Project-Based Work:

- **Nature:** Interns are assigned to work on specific projects, which could include tasks like developing a software application, testing software, or creating data models. These projects are usually aligned with the company's ongoing work and often have clear deliverables.
- **Mode:** Interns typically work independently or in small teams, with regular check-ins to discuss progress and receive feedback.
- **Example:** Developing a mobile app, designing a website, or creating an algorithm.

## 2. Research-Oriented Work:

- **Nature:** Interns might be involved in research tasks that help the company or institution solve specific problems or explore new technologies. This type of work is common in academic or research-based organizations.
- **Mode:** The intern conducts literature reviews, gathers data, analyzes findings, and helps draft research papers or reports.
- **Example:** Research in areas like artificial intelligence, machine learning, or block chain technology.

## 3. Support and Maintenance:

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- **Nature:** Interns assist with the maintenance and support of existing systems, software, or IT infrastructure. This includes bug fixing, system upgrades, troubleshooting, or performing routine tasks to ensure systems run smoothly.
  - **Mode:** Interns often work under the supervision of senior developers or IT administrators, gaining hands-on experience with operational systems.
  - **Example:** Debugging code, monitoring server performance, or updating databases.

#### 4. Software Development:

- **Nature:** Interns engage in hands-on software development, which may involve writing code, developing features, debugging, and testing. Interns contribute to ongoing development projects and often collaborate with other team members.
- **Mode:** The work is typically done in collaboration with a development team, using version control tools like Git for project management and communication.
- **Example:** Coding in languages like Java, Python, or C++ for software or applications.

#### 5. Data Analytics and Data Science:

- **Nature:** Interns may be tasked with analyzing large datasets, extracting meaningful insights, or building predictive models. This involves working with data analytics tools and programming languages like Python, R, or SQL.
- **Mode:** Interns typically use datasets provided by the company, applying data analysis techniques to derive actionable insights and reports.
- **Example:** Analyzing customer data, creating data visualizations, or building machine learning models.

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## CHALLENGES FACED BY STUDENTS IN INTERNSHIPS

Internships offer valuable learning experiences but can also present challenges that students need to navigate. These challenges vary depending on the type of internship, the industry, and the specific company, but common issues faced by students during internships in fields like computer science include:

### 1. Lack of Practical Experience:

- **Challenge:** Many students face difficulties when transitioning from theoretical learning in the classroom to real-world work environments. They may lack experience with practical tools, software, and technologies used in the industry.
- **Impact:** It can lead to feelings of inadequacy or frustration, especially when they are unable to immediately contribute to complex tasks.
- **Solution:** Interns can overcome this by being proactive in seeking help, using online resources for self-learning, and asking for more manageable tasks initially to build their confidence.

### 2. Communication Issues:

- **Challenge:** Interns, especially remote ones, may struggle with communication barriers, whether it's with team members, supervisors, or other departments. They may feel disconnected or unsure about how to communicate effectively in a professional setting.
- **Impact:** Poor communication can lead to misunderstandings, delays in completing tasks, and missed learning opportunities.
- **Solution:** Interns should actively seek clarification on assignments, schedule regular check-ins with their supervisors, and make an effort to participate in team meetings. Clear and open communication is key.

### 3. Balancing Internship with Studies:

- **Challenge:** Students often juggle internships with ongoing academic commitments. Managing time effectively between work responsibilities and coursework can become overwhelming.
- **Impact:** Stress, burnout, and lower academic performance are potential consequences.
- **Solution:** Effective time management is essential. Creating a schedule that allocates time for work, study, and rest, along with setting clear priorities, helps in maintaining a balance.

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#### 4. Limited Guidance or Mentorship:

- **Challenge:** Some interns experience a lack of mentorship or guidance from their supervisors. Without proper direction, they may feel uncertain about their tasks or struggle to develop their skills.
- **Impact:** This lack of support can hinder their learning and reduce the quality of work they produce.
- **Solution:** Interns should take the initiative to seek feedback regularly, ask questions, and request guidance when needed. Establishing a good relationship with a mentor can greatly enhance the internship experience.

#### 5. Difficulty Adapting to Workplace Culture:

- **Challenge:** Interns may find it difficult to adapt to the workplace culture, especially if they are working in a large organization with a formal or fast-paced environment. This includes understanding office etiquette, communication styles, and the organizational structure.
- **Impact:** Feeling out of place or uncomfortable can affect an intern's confidence and performance.
- **Solution:** Observing the workplace dynamics, engaging with colleagues, and asking questions about the culture can help interns integrate more smoothly. Being open to learning and adapting is crucial.

#### 6. Technical Skills Gap:

- **Challenge:** In fields like computer science, there may be a gap between what students have learned in school and the tools, programming languages, or frameworks required in their internships. For example, knowledge of specific programming languages or technologies may not always align with the internship requirements.
- **Impact:** Interns might struggle to keep up with technical tasks, resulting in slower progress and frustration.
- **Solution:** Before starting the internship, students can review the required tools and technologies. During the internship, they should seek out additional training or resources to quickly get up to speed.

#### 7. Limited Responsibility or Repetitive Tasks:

- **Challenge:** Some interns find that the tasks they are assigned are either too menial (e.g., data entry, document formatting) or do not challenge them enough to develop new skills.
- **Impact:** This can result in dissatisfaction and a lack of motivation.



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- **Solution:** Interns can request more challenging assignments or inquire about contributing to larger projects. It's also an opportunity to learn how even small tasks contribute to the broader goals of the company.

## **LEARNING OUTCOMES OF AN INTERNSHIP**

### **1. Practical Application of Knowledge:**

- Interns will apply theoretical concepts learned in the classroom to real-world problems, gaining hands-on experience in their field of study, such as computer science, software development, or data analysis.

### **2. Development of Technical Skills:**

- Interns will enhance their technical abilities by working with industry-standard tools, programming languages, software, and technologies, bridging the gap between academic knowledge and industry requirements.

### **3. Problem-Solving and Critical Thinking:**

- Interns will improve their problem-solving skills by tackling real challenges and finding innovative solutions. They will also develop critical thinking abilities while working on tasks that require analysis and decision-making.

### **4. Communication and Collaboration:**

- Interns will enhance their communication skills by collaborating with teams, presenting ideas, and engaging with supervisors and mentors. They will learn how to effectively communicate technical information to both technical and non-technical audiences.

### **5. Professionalism and Workplace Etiquette:**

- Interns will gain a deeper understanding of professional behavior, time management, workplace etiquette, and the importance of maintaining a positive attitude and work ethic in a professional setting.

### **6. Networking and Career Development:**

- Interns will have opportunities to build professional networks by connecting with colleagues, mentors, and industry professionals. This will help in career development and open doors for future job opportunities.

### **7. Understanding of Industry Practices:**

- Interns will gain insight into industry-specific workflows, tools, methodologies, and practices. They will develop a deeper understanding of how organizations operate and how their roles fit into larger projects and goals.

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#### **8. Feedback and Self-Improvement:**

- Interns will receive constructive feedback from supervisors and peers, which will help them identify areas for improvement. This feedback fosters personal and professional growth and prepares interns for future career success.

#### **9. Increased Employability:**

- Through the internship experience, interns will enhance their resumes with real-worldwork experience, boosting their chances of securing future employment opportunities in their field.

#### **10. Exposure to Emerging Technologies:**

- Interns will be exposed to the latest tools, technologies, and industry trends, expanding their knowledge and preparing them for future developments in their profession.

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## **INDUSTRIAL VISIT SUMMARY**

Institution: St. Philomena's Autonomous College, Mysore

Place Visited: BSNL Customer Service Centre – Regional Telecom Training Centre (CSCRTTC), Mysore

Date: [04-04-2025]

The students and faculty of St. Philomena's Autonomous College, Mysore, undertook an insightful industrial visit to the BSNL Customer Service Centre – Regional Telecom Training Centre (CSC RTTC), Mysore. The objective of the visit was to bridge the gap between theoretical knowledge and practical application in the field of telecommunications and digital infrastructure.

During the visit, the students were introduced to various aspects of telecommunication services managed and operated by BSNL. The session was initiated with a formal welcome and a briefing by BSNL officials, who provided an overview of the organization's role in India's telecom sector, including its evolution, present-day operations, and future plans in the digital era.

The core focus of the visit revolved around the functioning of the Regional Telecom Training Centre (RTTC), which is a premier training institute under BSNL. Students were taken through different modules of training and service mechanisms, including:

- Switching Technologies and Network Infrastructure
- Optical Fiber Communications and Broadband Services
- Mobile Communication Systems (GSM, 3G, 4G)
- Internet Protocol (IP)-based Services and VoIP
- Customer Service Operations and CRM

Demonstrations were conducted to showcase how various telecom systems are installed, managed, and maintained. The students had the opportunity to observe the Network Operation Centre (NOC) setup, which monitors large-scale communication networks, ensuring smooth data transmission and connectivity.

The BSNL trainers engaged the students in technical discussions and encouraged queries, fostering an interactive learning environment. In addition to technical exposure, students also gained insights into career opportunities in telecom and digital infrastructure, along with the skill sets required for industry readiness.

The visit concluded with a feedback session where students shared their learning experiences, highlighting how the exposure contributed to a deeper understanding of telecom operations, customer service mechanisms, and technological innovation.

Overall, the industrial visit to BSNL CSC RTTC Mysore proved to be a highly enriching experience, offering students practical insight into the workings of a major public sector telecom organization. It strengthened their academic foundation and provided a valuable perspective on emerging trends in communication technology.

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## CONCLUSION & RETROSPECTION

In conclusion, an internship is an essential experience that bridges the gap between theoretical knowledge and practical application. It provides students with a firsthand understanding of their field, be it computer science, engineering, business, or any other discipline, allowing the motto apply what they have learned in real-world scenarios. Interns gain valuable hands-on experience, develop technical skills, and learn how to navigate workplace dynamics. They also grow personally, improving communication, time management, and problem-solving abilities.

Reflecting on the internship experience, students often recognize significant growth—whether it's in technical proficiency, professional behavior, or confidence in their abilities. They also gain insight into the specific tools, technologies, and methodologies used in their industry, which not only enhances their skill set but also prepares them for future career opportunities. The challenges faced during the internship, such as adapting to a new environment, managing workloads, and overcoming technical gaps, contribute to the intern's overall development and resilience.

Ultimately, internships provide a comprehensive learning experience that helps shape a student's career trajectory. The exposure to industry professionals, networking opportunities, and real-time feedback contribute to both personal and professional development, making internships a crucial phase in preparing for a successful career. This experience not only equips interns with the skills and knowledge needed to excel but also boosts their confidence and employability, offering a strong foundation for future success in their chosen fields.