COMPUTER SCIENCE & ENGINEERING DEPARTMENT THAPAR UNIVERSITY PATIALA



HAND BOOK FOR

PROJECT SEMESTER / INDUSTRIAL TRAINING / INTERNSHIP

TABLE OF CONTENT

Content

1. Introduction	01
2. Learning Outcomes	04
3. Registration process for	or project semester06
4. Format for the project	report
5. Reflective diary	11
6. Poster presentation	13
7. Video presentation	
8. Peer review	
9. Other formatting instru	uctions16
10.Instruction for making	final presentation17
11.Evaluation forms, eval	luation parameters and their weight age18

1.0 INTRODUCTION

Project semester is an important part of the education for a computer professional and one should try to get the most out of it. The purpose of the project semester is to further develop the understanding related to the implementation, design and theoretical aspects of the computer science and its application to the practical problems.

Many of the subjects that a student had studied in the university have a direct impact on what the student will be doing in the software house / industry. Student will extend and deepen the knowledge of the computer science while working. Student will be learning what it's like to be part of a workforce: how to deal with the fellow workers, including your bosses; how to take suggestions, (including criticism); how to contribute in the team, and so on.

Immersed in this absorbing and exciting world, it's easy to lose sight of the academic world, but remember that the project semester is really part of your university education. Computer Science & Engineering department has developed a number of learning outcomes for it, and department will evaluate a student on the basis of these tasks and goals to see how well a student has achieved the learning outcomes.

Here are the key highlights for a project semester:

- Meant for industrial projects at software houses, IT section of non-IT Company or Research Project at any reputed academic institute under guidance of an academician.
- Student can work in any domain related to any phase of software development (Analysis, Design, Coding / Development, Testing, and Customization).
- This can be done in India or Outside India.
- IAP (Industrial Attachment Program) cell is a unit at CSED that takes care for 6 month project semester training of final yr. B.E. CSE students.
- IAP cell coordinates with various organizations and takes initiative for arranging interviews for the CSE students looking for 6 months training.
- IAP cell acts as an interface between the industry and students for providing support or solving the grievances (if any).
- Start Dates for a project semester (tentatively) are from 20th Dec to 5th Jan and End Dates are tentatively around 20th May to 15th June. Presence of 4.5⁺ months in the industry is **mandatory**.
- Splitting the span of project semester in different organizations is **not** allowed.

1.1 Why is the final-year project important?

- It is the largest single piece of work you will do during your degree course.
- It is the part of the curriculum that allows you to specialize in a topic you are good at or enjoy.
- It allows you to show off a wide range of the skills and knowledge learned during your course.
- It encourages integration of material learned in a number of course units.
- It gives you an opportunity to learn higher level of project related skills as given in the learning outcomes for project semester.

1.2 How to choose the company / research institute for project semester?

- Company / research institute must deal in the software related projects.
- Work assigned having a profile of system analyst is acceptable.
- Student must not opt for the profile related to sales or marketing.
- Student may opt for startups.
- Student is not allowed to undergo project semester by opening/starting his/her own company or startup. (student may start his/her initiative after course completion)

1.3 How to choose the project?

- Project must be related to the phases of software development life cycle.
- Projects having some research insights will be appreciated.
- No Self-Certification or **online training courses** will be considered as a substitute of project semester (like https://www.coursera.org, www.w3schools.com etc.) however, these can be good value additions to the real industry projects and may add value to your assessment.
- Demo projects like calculator, text editor, static web site etc. will not be entertained at all.
- Link to explore latest ideas for some benchmarking project: http://www.1000sciencefairprojects.com/

1.4 Some Example Projects

These are only sample and should not be considered as recommendations.

• Example1: Android Application for Call Taxi

The main goal of this project is to develop an accessible and comprehensive Eclipse structure application, can potentially assist individuals to book a taxi from a phone and for the company to maintain a database for booking and sending driver details.

• Example2: Biometric Authentication System Using the Human Ear

The main aim of the project is to develop a biometric authentication system using the ear. The process will involve several steps from acquisition of the image to the point where a positive identification can be made using the system. The image was acquired using a digital camera.

1.5 List of organizations

Annexure 1 is having the information related to the name of software company/research institute, stipend offered by the company and the count of students undergone for the project semester.

2.0 LEARNING OUTCOMES

Learning outcomes (LO) are statements of what a learner is expected to know, understand and / or be able to demonstrate after completion of a process of learning. LO may be large enough to account for a course or small enough to account for a module or unit. LO seek to describe the progress of the student's learning in terms of the knowledge which has been acquired, the comprehension of that knowledge, and the capacity, in relation to that body of knowledge, to apply it, to analyse it, to synthesize it, and to evaluate it.

Course Outcome (CO) for B.E. Project Semester

- CO1 Identification, formulation and analysis of the existing problem in the (non-automated) work flow for performing a specific task.
- CO2 Design and implementation of the automated solutions for the assigned/identified real world problems.
- CO3 Technical report writing.
- CO4 Practice and further development of skills in time management and reporting within an industrial or research laboratory setting
- CO5 Contribute to an ethical and professional work culture and also to learn to work in diverse teams.

Progra	am Outcome (PO) Description
PO1	Apply the knowledge of statistical and mathematical fundamentals, along with advanced computer science and engineering principles and practices to the solution of complex engineering problems.
PO2	Identify, formulate, review, and analyze complex engineering problems to reach substantiated conclusions using domain knowledge of Computer Science and engineering.
PO3	Design system components and processes that meet the quality criteria with appropriate consideration for the cultural, societal, and environmental considerations.
PO4	Use research-based knowledge and methods including design of experiments, analysis and interpretation of data to provide valid conclusions.
PO5	Apply appropriate techniques, methods and algorithms, resources, and tools to various engineering activities with an understanding of the limitations.
PO6	Apply contextual knowledge to assess societal, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO7	Understand the impact of the Computer Science and engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	Communicate effectively with engineering community and society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	Demonstrate knowledge and understanding of the computer science and engineering and management principles to manage projects in multidisciplinary environments.
PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M	M	L	M	L		L	L		M	Н	Н
CO2	M	M	Н	M	M	L	L	L	L	L	M	L
CO3	M	M		M			M			Н	Н	
CO4								Н	M	Н		M
CO5								M	Н	Н		L

3.0 REGISTRATION PROCESS FOR THE PROJECT SEMESTER

Before proceeding for the project semester, steps given below are mandatory to be followed. IAP cell has automated all the activities involved in the project semester.

- 1. Connect to our web site: www.csethapar.in/IAP
- 2. Click on the **Student Panel**
- 3. Click on the link **Register with us**
- 4. Create your account at IAP Online portal by filling the form properly with complete integrity.
- 5. If a student is opting for an **ALTERNATE** semester then fill "Alternate Semester" in the field "company name" while registering at IAP portal.
- 6. If a student is opting for **SOFTWARE COMPANY / RESEARCH INSTITUTE** then write the exact and full name of company in the Field Company Name while registering at IAP portal.
- 7. After step 5 or 6 <u>Verify your account</u> by clicking the link sent at the E-mail, which you have provided while filling the details. (Please check your INBOX as well as SPAM folder, as the verification mail may go into SPAM folder.)
- 8. <u>Up-to this point your registration has not been considered as complete</u>, therefore, student need to follow and complete the following steps:
- 9. **SUBMIT your documents** related to the project semester and get your details verified from IAP coordinator / IAP Team.
 - Fee Slip (Proof that you have paid the fee for your last semester). For this you need to contact the accounts section @ Thapar University.
 - No dues Form duly signed and stamped by the hostel warden. If you are not a hostler then you have to write "I am a DAY SCHOLAR" on the No dues form. [No dues form is similar to the registration form, that student use at the time of registration in the new semester and this can be taken either from the hostel or from office of CSED.]
 - ➤ Offer letter from the company at the letter head of the company. [Or the student may submit the printout of the e-mail that he/she may have received from the company that has given the confirmation for the project semester.]

Please NOTE that without submitting these documents, student will not be considered as registered @ IAP Cell. After submitting these documents, student MUST collect the registration slip, duly signed and stamped by the IAP Cell.

- 10. After doing the verification of the student and handing over the registration slip to him/her, the account created by the student at IAP portal will be finally activated (By the IAP coordinator). And **now the student may fill the entries present in the link PHASE 2**.
- 11. While entering the mentor's detail, student must ensure that the details must be given properly. After finishing your PHASE 2 for the registration, request your MENTOR to create his/her account at online portal of IAP.
- 12. Please note that your mentor MUST create his/her account after saving the related details by the student.
- 13. For creating the account by mentor, he/she has to click **Mentor panel**, and need to fill one form. After this he/she has to verify his/her account by clicking the link available in the mail sent to him/her. Mail can be seen at INBOX or in the SPAM folder.]

Stay connected @ your Google group, all the information will be floated here.

[Google group has already been created at the time of joining of the students, but if any student is not a part of the common group at Google, then he/she may contact class representative / faculty coordinator for the 4th Yr / IAP Coordinator]

4.0 FORMAT FOR THE PROJECT REPORT

PROJECT SEMESTER REPORT

(Title of the Project)

by

(Name of student)

Roll No.

Under the Guidance of

(Name of Industry coordinator with designation)

(Name of faculty coordinator with designation)

Submitted to the
Computer Science & Engineering Department
Thapar University, Patiala

In Partial Fulfillment of the Requirements for the Degree of Bachelor of Engineering in Computer Engineering at Thapar University, Patiala

June 2015

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Title of the Pr	roject						
by (Name of sa	tudent)						
Place of work:	(name of company or organization)						
Submitted to t	he Computer Science and Engineering Department, Thapar University						
June 2015							
In Partial Fulfi Computer Eng	illment of the Requirements for the Degree of Bachelor of Engineering in gineering						
Abstract:							
a very brief s Somebody uni	iption about the project in brief (not more than 250 words). The abstract is summary of the report's contents. It should be about half a page long. Familiar with your project should have a good idea of what it's about having act alone and will know whether it will be of interest to them.						
Author							
	(Student's Name)						
Certified by (Name & Signature) (Industrial Coordinator / mentor)							
Certified by							
J	(Name & Signature) (Faculty Coordinator / mentor)						

Accepted by Mr. Vinay Arora
(Name & Signature) (Project Semester Coordinator, CSED)

CERTIFICATE (PROJECT SEMESTER TRAINING) FROM THE COMPANY OR THE ORGANIZATION

Candidate must place the scanned or original copy of the certificate related to completion of the project semester as received from the software company / research institute.

TABLE OF CONTENT

This should list the main chapters and (sub) sections of your report. Choose self-explanatory chapter and section titles with 1.5 spacing (for clarity). Include the page number indicating where each chapter/section begins.

COMPANY PROFILE

A brief description about what the company does and what are the products delivered by the company in which the student is working as an intern. Give this detail in 1 or 2 (max.) pages.

INTRODUCTION

This is one of the most important components of the report. It should begin with a clear statement of what the project is about so that the nature and scope of the project can be understood by a naive reader. It should summarize everything you set out to achieve, provide a clear and concise description of the project's background, relevance and main contributions. It is useful to state the main objectives of the project as part of the introduction.

BACKGROUND

The background section of the report should set the project into context and give the proposed layout for achieving the project goals. The background section can be included as part of the introduction but is usually better as a separate chapter, especially if the project involved significant amount of ground work. When referring to other pieces of work, cite the sources where they are referred to or used, rather than just listing them at the end. Candidate should also list the motivation behind choosing this project.

BODY OF REPORT

The central part of the report usually consists of three or four chapters detailing the technical work undertaken during the project. The structure of these chapters is **highly project dependent**. They can reflect the chronological development of the project, e.g.

design, implementation, experimentation, optimization, evaluation etc. If you have built a new piece of software you should describe and justify the design of your program at some high level, possibly using an approved graphical formalism such as UML. It should also document any interesting problems with, or features of, your implementation. Integration and testing are also important to discuss in some cases. It may also include the system over which the experiments are performed for checking the successful implementation/ execution of the project. You need to discuss the content of these sections thoroughly with your supervisor.

OBSERVATIONS AND FINDINGS

The description of the things you have identified and explored about your project.

LIMITATIONS

This section contains the boundaries of the project where the project implementation will not work or the implementation fails.

CONCLUSIONS AND FUTURE WORK

The project's conclusions should list the things which have been learnt as a result of the work you have done. It is common to finish the report by listing ways in which the project can be taken further. This might, for example, be a plan for doing the project better if you had a chance to do it again, turning the project deliverables into a more polished end product.

It is not mandatory to track the same structure as provided above. Student may incorporate the amendments as per the nature of the project.

5.0 REFLECTIVE DIARY

Introduction

Reflection is a structured thought process that helps you learn from the experiences you are having on the Internship Programme. Unfortunately, we do not always learn from experience and reflection is the process that helps us to gain the maximum understanding from the situations and experiences we have. As part of the assessment for the internship, you are required to complete a Reflective Diary. The aim of the diary is to help you bridge the gap between your Computer Science education and the authentic workplace practice you experience on the internship.

What do you reflect on?

Reflection is most effective when it is applied to areas of your experience that are memorable or significant in some way to you. For example, an incident, event or activity that:

- Went better than you expected
- Went worse than you expected
- Caused you to stop and think
- Was unexpected
- Challenged your assumptions about what you thought would occur

In short, the best reflections tend to be about those events or incidents that challenged what you thought before, presented a dilemma or left you with a sense of unease. Within the context of the Internship you should focus your reflections on the key learning outcomes of the module:

- the design and development of systems at the forefront of computer science research, critically evaluating your own contribution
- how you applied your theoretical knowledge in an industrial or research laboratory setting to solve real world problems
- the development of your communication, management and teamwork skills
- the development of your time management and reporting skills within an industrial or research laboratory setting
- the development of your understanding of an ethical and professional work culture

How do you reflect?

Reflection is best thought of as a structured process, not just a description of what happened. A useful scaffold is presented below:

1. Descriptive Writing

Write a paragraph or two that is a straightforward account of the incident, event or activity, including any context you deem relevant. This helps to take you back to the event and start the reflective process.

2. The Reflection

During this stage of the entry you start reflecting on the event by questioning yourself; for example:

- Why did I decide to reflect on this event; what is it that makes this memorable or makes me uneasy?
- What has surprised me about this?
- What has challenged the way I think or the way I thought things would be?

- What were my assumptions about how things would be compared to how they actually are?
- What have I learnt about myself as a result of this event?
- What have I learnt about the practice of the environment I am in?

Through these questions and consciously thinking about the event, you will arrive at a set of explanations or new understandings about the incident. Think about these explanations and why you think the way you do about them.

3. The Outcome

- All reflections must have an outcome and this needs to be clearly articulated and presented at the end of the reflection
- Outcomes could include:
 - > a new understanding
 - > a plan to research something
 - > a commitment to yourself or others

Note: Events should be reflected upon in chronological order as is standard for a diary. Student need to write a (month wise) reflective diary (one page write-up) for every month. Description should not exceed 500 words/per month.

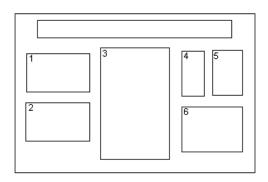
6.0 POSTER PRESENTATION

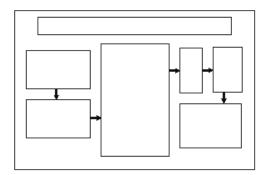
Designing a poster is a big challenge: it must be visually appealing (suggestion: lots of graphics and little text!), concise, informative and should pique the viewer's interest. Here are some suggestions for topics you might cover (feel free to add or modify):

- What your host organization does and what responsibilities and/or activities were assigned to you by your host organization?
- What you did and what you learned in the internship. What kinds of opportunities (other than assigned duties) did you have to enhance your knowledge?
- Constructive ideas on how your internship experience might have been improved.
 What additional classroom knowledge might have been useful before your internship experience?
- The entire poster must be on a 40" x 60" sheet of paper or equivalent. The poster does not necessarily have to fill the entire working area.
- The poster must be oriented in the "landscape" position (long dimension is horizontal).
- A banner displaying your poster title, name, and department (or class, if appropriate) should be positioned at top-center of the board (see Figure 1).
- Make it obvious to the viewer how to progressively view the poster. The poster generally should read from left to right, and top to bottom. Numbering the

individuals panels, or connecting them with arrows is a standard "guidance system".

• Leave some open space in the design. An open layout is less tiring to the eye and mind.





- Text should be readable from five feet away. Use a minimum font size of 18 points.
- Present numerical data in the form of graphs, rather then tables (graphs make trends in the data much more evident). If data must be presented in table-form, KEEP IT SIMPLE.
- Visuals should be simple and bold. Leave out or remove any unnecessary details.
- Make sure that any visual can "stand alone" (i. e., graph axes are properly labeled, maps have north arrows and distance scales, symbols are explained, etc.).
- Use color to enhance comprehension, not to decorate the poster. Neatly coloring black-line illustrations with color pencils is entirely acceptable.
- Make sure that the text and the visuals are integrated. Figures should be numbered consecutively according to the order in which these are first mentioned in the text.
- Keep the text brief. Blocks of text should not exceed three paragraphs (viewers won't bother to read more than that). Use text to (a) introduce the study (what hypothesis was tested or what problem was investigated? why was the study worth doing?), (b) explain visuals and direct viewers attention to significant data trends and relationships portrayed in the visuals, and (c) state and explain the interpretations that follow from the data. In many cases, conclusions can be summarized in a bullet-point list.
- Depending upon the stage or nature of your project, the text could also include sections on future research plans or questions for discussion with viewers.
- Cite and reference any sources of information other than your own, just as you would do with a research paper.
- SIMPLICITY IS THE KEY. Keep to the point, and don't try to cover too many things. Present only enough data to support your conclusions. On the other hand, make sure that you present sufficient data to support your conclusions.
- When you begin to make your poster, first create a list of the visuals that you would use if you were describing your project with only the visuals. Write the text after you have created the list of visuals.
- Before the poster session, rehearse a brief summary of your project. Many viewers will be in a hurry and will want a quick "guided tour" of your poster.

Don't be afraid to point out uncertainties in your work; this is where you may get useful feedback.

7.0 VIDEO PRESENTATION

Student has to make his/her own video in which s/he has to present / tell about the project and project semester. Student has to upload this video at www.youtube.com and must mention the complete URL in the final report (in a sub section with heading "VIDEO PRESENATION" after poster presentation).

- Name of the student, name of the company, name of the university and the title of the project must be there in the start and must stay for 10 seconds.
- Duration of the video should be 4-6 mins.
- Nature of video may be of webinar (online conference) type also.
- Video should be of HD / high quality and should be able to run on popular platforms.

8.0 PEER REVIEW

Peer review is the evaluation of work by one or more people of similar competence to the producers of the work. Here, student needs to showcase his/her project work including the project report, video, and poster to his/her (only one) peer (from the same year and same class). Student who is acting like an evaluator here has to fill one form in which he need to judge and rate the effort invested by his/her peer. At the time of presentation, every student needs to submit the filled and signed forms after evaluation by his/her peer. Student who will fail in submitting the filled form by the peer will get zero marks in this sub section. One student can only evaluate for only one other student. Form for the peer evaluation is available in the **Annexure 6**. Student must not follow the swapping while doing the evaluation (If student A has been evaluated by student B, then B must not be evaluated by A).

9.0 OTHER FORMATTING INSTRUCTIONS

- 1. At the time of final evaluation, **one hard bound copy** of the report has to be given by the candidate to the panel (this copy will be retained by the college). Color of the outer cover must be black and text should be written in golden color.
- 2. The spine of the report must have the name, roll no. of the student and the title of the project.



Figure showing spine of the book

- 3. If desired by the student, s/he may take another printout for future reference.
- 4. Text should be properly justified.
- 5. Pages should be numbered and numbering should start from first page after the hard cover page.
- 6. Subject matter should be typed on single side.
- 7. Source-code will not be a part of the report.
- 8. Margin space 1 inch (top-bottom-left-right)
- 9. Count of pages of report must be **25-50** (count of printed pages).
- 10. The matter contained in the report should be typed in MS word (1.5 spacing)
- 11. Font used must be Times New Roman
- 12. Font size 16 pts (for heading content)
- 13. Font size 14 pts (for sub-heading content)
- 14. Font size 12 pts (for normal paragraph content)
- 15. Numbering must be followed as shown
 - (1. Introduction
 - 1.1 Under introduction
 - 1.1.1 Under the subheading 1.1)
- 16. Text alignment must be justified (for normal paragraph content)
- 17. Figures / tables / diagram used must be labeled (like Figure 1, Table 1)

10.0 INSTRUCTIONS FOR MAKING FINAL PPT

Duration for presentation must be **8-12 mins**. (Maximum) and slide count must be restricted to **16 ONLY**. Here is the brief description related to the content desired in the slides:

1st Slide: Title of project, Name of supervisor in industry, Name of organization, Start date of project, End date of project

2nd Slide: Introduction related to company/organization/research institute

3rd Slide: Background of project

4th Slide: Scope and Utility of the project

5th Slide: Architecture of the project (Block diagram)

6th Slide: Techniques and Tools used

7th & 8th Slide: Most relevant snapshot of project

9th Slide: Professional and technical learning

10-13th Slide: Content shown here will remain flexible i.e. this will be as per student's choice. Student can present Algorithm, Flowchart, Literature Survey related to topic or any other relevant content related to the project/working.

14th Slide: Key Highlights of the project

15th Slide: Video (with its link) about project semester training and project

16th Slide: Feedback about the project semester and faculty visit.

<u>Note</u>: Above mentioned sequence can be customized as desired by the student. This given sequence covers almost all the aspects that one can present.

11.0 EVALUATIONS FORMS, EVALUATION PARAMETERS AND THEIR WEIGHT AGE

• 1st Feedback Form

This form will be filled by the industrial mentor at the time of 1st time visit of the faculty mentor from CSED, TU. In this faculty mentor gather the generic feedback from the industrial mentor as well as from the student. Student may share his/her concerns (if any) with his faculty mentor. Feedback form is available in the **Annexure 2**.

• Evaluation Form (to be filled by the industrial mentor) (25 marks)

This form will be filled by the industrial mentor at the time of 2nd time visit of the faculty mentor from CSED, TU. Here, industrial mentor has to provide the marks to the student. Given below are the parameters on the basis of which marks will be allocated. Evaluation form is available in the **Annexure 3.**

- Job Knowledge (Refers to knowledge clarity of fundamentals, and latest development.)
- Management Skills (Planning, organizing and application skills during the course of training/interaction.)
- Technical Skills (knowledge about techniques/tools used at various phases/stages in project.)
- Project Execution (Refers to Setting Time frames, Efforts put into for completion of the project; Maintenance of work diary.)
- Communication Skills (Refers to written/oral expression and presentation skills.) and Regularity and Punctuality (Refers to Sanctioned authorized leave, absence without permission and late coming & leaving work place early.)
- Evaluation Form (to be filled by the faculty mentor) (25 marks)

This form will be filled by the faculty mentor after 2nd time visit. Faculty will assign marks on the basis of following parameters. Evaluation form is available in the **Annexure 4**.

- Job knowledge (refers to knowledge clarity of fundamentals, and latest development)
- Coordination with industrial mentor (refers to ability to work harmoniously with superiors and subordinates)
- Coordination with faculty (refers to ability to work harmoniously with faculty)
- Job involvement (refers to the concern and diligence shown in execution of the project)
- Techniques/Tools used at various stages

- Evaluation by the panel @ CSED, TU (50 marks)
 - Project report (10 marks)
 The project report is an extremely important aspect of the project. It should be properly structured and also necessary and appropriate information regarding the project. Instructions related to the project report

and its formatting has already been given in section 4.

- Presentation (may include demonstration) (5 marks)
 A presentation is the process of presenting a topic to an audience. It is typically a demonstration, lecture, or speech meant to inform, persuade, or build good will. This involves showing by reason or proof, explaining or making clear by use of examples or experiments. Put more simply, demonstration means to show clearly.
- Nature of the project (10 marks)
 This may include the scope, size, utility, type and usefulness of the project.
- Viva (answers to the queries) (5 marks)
 In this the student has to answer the question in such a way as to demonstrate sufficient knowledge of the subject.
- Reflective diary (5 marks)
 Detail has already been given in the section 5.0
 This is mandatory and student needs to include this in the final report.
- Poster presentation (5 marks)
 Detail has already been given in the section 6.0
 (Student need to submit the poster to the coordinator and department will arrange for the display of these posters.)
- Video presentation (5 marks)
 Detail has already been given in the section 7.0
 Student need to show this video at the time of presentation.
- Peer review (5 marks)

Annexure 1. List of companies with count of students and amount of stipend

Company Name	Count	Stipend
A2 it	4	
Accenture	1	
Aldoshik	1	7000
Amadeus Software Labs India Pvt Ltd.	7	18000
Apollo Munich	1	
Ascentx Software Development Services	2	10000
authorGEN	2	22000
Axind software private limited	2	5000
B4S	1	10000
Bharti Airtel Limited	1	
BlackNGreen	1	8000
BlackRock	10	24000
Bright Lifecare Pvt. Ltd. (HealthKart.com)	1	25000
Bulls Eye	3	8300
BYTE MATRIX PVT. LTD.	2	5000
Cadence Design Systems	1	
Chic Mic	6	5000
СМС	5	7000
CureOnDelivery	2	8000
D.E. Shaw	1	35000
DataWeave	1	15000
EFREI	1	
Ericsson	6	15000
Ernst & Young LLP	1	
expedia	1	30000
Freescale	3	20000
Geoligence Technologies(Affiliate of Smart Commerce Solutions Pvt. Ltd)	1	20000
GingerMind Technologies Pvt Ltd	1	15000
Goldfinch Mobile Solutions	1	
Grofers	1	15000
Hadoolytics	4	18000
HCL	2	
Healthkart	1	25000
Hike Ltd.	2	30000
Нр	1	
IIT-Bombay	1	10000
impinge solutions	1	
In house project	1	

Indian Institute of Technology Madras	1	6000
INDIVAR SOFTWARE SOLUTIONS PVT. LTD.	2	
Infoedge(Naukri.com)	2	15000
Infogain	2	15100
Informatica	4	20000
Infowiz	1	
Internshala	1	12000
KPMG	1	10000
Limetray	1	10000
Magic Software Pvt. Ltd.	3	10000
Mahindra & Mahindra LTD. (Swaraj Division)	1	
Make My Trip	9	20000
MAQ Software Hyderabad Pvt. Ltd.	3	20,000
Microsoft IDC	1	35000
Nagaro	10	15000
Naukri.com	2	15000
NewGen	1	
NHPC	1	
nu branding	1	
Nucleus Software	3	15000
Oditi Global Solution Pvt. Ltd.	1	
OGS private limited	1	
Oracle Financial Services Software Itd.	1	25000
Paxcel Technologies	3	10000
Punjab Communications Limited	1	
Routofy	2	15000
SanDisk Corporation	2	18000
SAP Labs R&D	1	25000
Sapient	5	20,644
Sebiz Infotech Pvt. Ltd.	1	
Siemens	1	
snapdeal	2	25000
Softtrix Web Solutions	1	
Span Infotech	1	
SS Tech Solutions	1	
ST MICROELECTRONICS	13	18000
STPI	1	
Style Monk	1	7500
Success Factors	1	30000
TATA motors	2	18000

TechSprinters	1	
TouchTalent	2	
Trantor	1	
TWEETSECRET	1	
UTrade Solutions	1	10000
Virtual Engineering Services (P) Ltd.	1	
Wipro	1	
Xplanck	1	10000
Z.S Associates	1	20000
Zomato	3	15000
Zostel	1	10000
ZTE Telecom Lucknow	1	15000

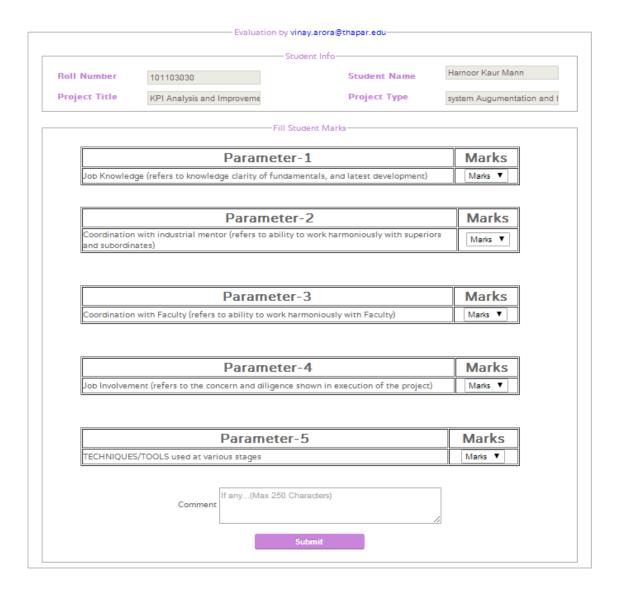
Annexure 2. 1st Feedback Form

	PF	Thapar Uni ROJECT SEME	ER SCIENCE AND Versity, Patiala STER Session 20 ST VISIT REPOR	014	
	054	002004	Date of vi	sic (TTTT WINT DD)	
oll Number		003001			
udent Name		nmy_Tpr			
ompany/Organization					
ompany/Organization	SAF Address				
	Brief Progr	ress Report (To	be filled by Indust	rial Mentor)	
*Topic/Title of the P	roject IAP Aut	omation			
*Type of Project	Softwa	re Development ▼			
	Det	tails of Project	Semester Assignm	ents	
*Assignment 1	Student registration		*Status	Completed	▼
Assignment 2	Write here to fill the	details	Status	Choose One	. 🔻
Assignment 3	Write here to fill the	details	Status	Choose One	. •
*HR Name	Vinay Arora	*HR (Contact No.	8968924161	
*HR Email Id	vinay.arora@thapar.ed	u			
*Remarks of Indust	ry Coordinator	ok			
—(To be filled by Ind	ustrial Mentor, Pre	eferably in cons	ultation with Facu	lty Coordinator	from Thapar University)
*Possibilty of cons	ultancy (if any)	May be discuss	ed		
*Over all Progress		6) Not Sa	ctory tisfactory amining	
Faculty Coordinator F	rom Thapar University		mation (Pre filled) Mentor	at Company/Orga	nization
Name	Mr. Vinay Arora		Name		Vinay
Designation	Assistant Professor		Design	ation	Software Engineer
Email Id	vinay.arora@thapar.ee	du	Email I	d	vinay.arora@thapar.edu

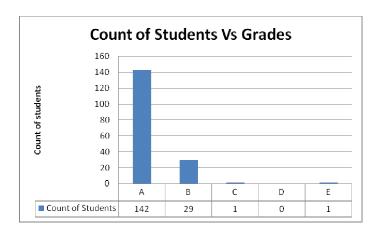
Annexure 3. Evaluation Form (to be filled by the faculty mentor)

Parameter-1 Job Knowledge(Refers to knowledge clarity of	on by Mentor at Company————————————————————————————————————	
Parameter-1 Job Knowledge(Refers to knowledge clarity of	, , ,	
. Job Knowledge(Refers to knowledge clarity of	Details	1
. Job Knowledge(Refers to knowledge clarity of undamentals, and latest development.)		Marks
	A) Comprehensive knowledge about the job at hand.	5
undamentals, and latest development.)	B) Satisfactory knowledge about the job at hand.	2-4
	C) Little or no knowledge about the job.	0-1
	Marks obtained	Marks ▼
Parameter-2	Details	Marks
Farameter-2	A) High management skills: appropriate planning with	5
	proper organization and application of plan. B) Satisfactory management skills: lacking in one or	
 Management Skills(Planning, organizing and application kills during the course of training/interaction.) 	more field.	2-4
	C) Poor management skills.	0-1
	Marks obtained	Marks ▼
Parameter-3	Details	Marks
	A) Through knowledge about the tools and techniques used at various stages of development.	5
Tachnical Chilleffer avuladas about tachniques/tools used	B) Satisfactory knowledge about the tools and techniques used at various stages of development.	2-4
. Technical Skills(knowledge about techniques/tools used t various phases/stages in project.)	C) Little or no knowledge about the tools and	
***************************************	techniques used at various stages of development. (may lead to project failure)	0-1
	techniques used at various stages of development. (may lead to project failure) Marks obtained	0-1 Marks ▼
	lead to project failure) Marks obtained	Marks ▼
Parameter-4	lead to project failure) Marks obtained Details	Marks ▼
	lead to project failure) Marks obtained	Marks ▼
	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of	Marks V
Parameter-4	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views.	Marks ▼ Marks 5 2-4
Parameter-4 Communication Skills(Refers to written/oral expression	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views. C) Not able to express views clearly.	Marks ▼
Parameter-4 Communication Skills(Refers to written/oral expression	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views.	Marks ▼ Marks 5 2-4
Parameter-4 Communication Skills(Refers to written/oral expression	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views. C) Not able to express views clearly. Marks obtained	Marks ▼ Marks 5 2-4 0-1
Parameter-4 Communication Skills(Refers to written/oral expression and presentation skills.)	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express views clearly. C) Not able to express views clearly. Marks obtained Details A) High: was regular and punctual throughout the entire	Marks ▼ Marks 5 2-4 0-1 Marks ▼ Marks
Parameter-4 Communication Skills(Refers to written/oral expression and presentation skills.) Parameter-5 Regularity and Punctuality(Refers to Sanctioned	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views. C) Not able to express views clearly. Marks obtained	Marks ▼ Marks 5 2-4 O-1 Marks ▼ Marks Marks
Parameter-4 Communication Skills(Refers to written/oral expression and presentation skills.) Parameter-5 Regularity and Punctuality(Refers to Sanctioned uthorized leave, absence without permission and late	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views. C) Not able to express views clearly. Marks obtained Details A) High: was regular and punctual throughout the entire training period. B) Medium: took frequent leaves and/or lack of punctuality.	Marks ▼ Marks
Parameter-4 Communication Skills(Refers to written/oral expression and presentation skills.) Parameter-5 Regularity and Punctuality(Refers to Sanctioned	Details A) Good communication skills. Able to express views clearly. B) Satisfactory communication skills. Need help of native tongue to express some views. C) Not able to express views clearly. Marks obtained Details A) High: was regular and punctual throughout the entire training period. B) Medium: took frequent leaves and/or lack of	Marks ▼ Marks 5 2-4 O-1 Marks ▼ Marks Marks

Annexure 4. Evaluation Form (to be filled by the faculty mentor)



Annexure 5. Chart representing the count of students and final grades



Annexure 6. Evaluation Form for Peer Review

Name of the student: (to be reviewed)		Roll no. of the student:					
	e submitted by the student wh Handover this to the panel at						
Title of the project:							
Name of the company:							
Project report (Tick the appropriate)	Excellent	Good	Average				
Project poster (Tick the appropriate)	Excellent	Good	Average				
Project video (Tick the appropriate)	Excellent	Good	Average				
Rate the work done	0 – 10 points	(Provide rating here) \rightarrow					
Give marks to the student on the basis of the overall performance	0 -5 marks	(Provide marks here) →					
Abstract of the project	et (max. 100 words):						
J	hs of the work done by the st						
Provide some useful recommendations (It may be some improvements, some suggestions to further raise the quality of the project):							
Name of the evaluator student:		Roll no. of the evaluator student:					
Signature of the Evaluator student:							