## Integrated Project Guidelines

1. The project statement should be capable of engaging students in a meaningful ‘**Engineering Project** ‘for the full stipulated time of 10-12 weeks (48 hours-60 hours) (approximately) starting from 13th Jan2025.
2. Theintegratedprojectwillbe considereda full-fledged course of **2 credits.**
3. Team can choose problem for project from given problem statement list, or you can choose any latest real problem, or you can do research work on specific research topic under guidance of your faculty in charge.
4. A student group can opt for projects in the following areas which fulfil the minimum requirement of Avali engineering project asper the specialization track opted.
   * Studentsofthesamegroupcanformteam.Eachteamconsistsof4stu dents.
   * Student will submit the IP Synopsis to the irrespective Faculty incharge.
   * The faculty in charge will provide the exact time of the evaluation; team members need to approach the faculty in charge for the synopsis submission and for other evaluations.
   * .
   * In case of not following the deadlines of the evaluation, a student will be considered as absent for that evaluation
   * Students need to follow the instructions given by the faculty in charge
5. EvaluationScheme&Components:

|  |  |  |
| --- | --- | --- |
| **Evaluation Component** | **Total Marks** | **Date for evaluation(Tentative schedule)** |
| Synopsis | 10marks | 21th-28th Jan,2025 |
| Internal Evaluation | Phase1Evaluation-10marks | 11st-15thFeb, 2025 |
| Phase2Evaluation-10marks | 22nd-27th March, 2025 |
| Phase3Evaluation-10marks | 13th – 18th April 2025 |
| Final Evaluation Viva | 60marks | 27th –31st April2025 |

1. The Specific Formats are attached in Annexure -I, Annexure II and Annexure III. Report format is attached. The Synopsis and Project Report and evaluation for every group are to be submitted to the Faculty In-charge as per the deadlines mentioned. The phase 1, 2, 3 targets should be mentioned in theSynopsis.Thephase1, 2, 3 evaluations can be in the form of PPT Presentation.
2. Annexure-I---for Synopsis

Annexure II --- For Project Final Report Annexure III ---for Research Proposal

1. **Project Statement:**

**AnnexureI (For Project development)**

#### Approximate duration(in hours)to complete the project:

1. **Proposed Project in charge:**

#### Team Members along with roll no’s:

**a.**

#### b.

**c.**

#### d.

1. **CheckPoints:**
   1. Does the project statement result in a product? If yes, what type of product?
   2. if it is a product, can a prototype be made, if not, what is it, which we can produce that our teachers can evaluate.
   3. Does the project statement use multiple concepts to achieve the outcome? (yes/no)
   4. does it have enough for our team members to do sufficient amount of work? (yes / no)
2. **Technical Nodes** (*add more rows in the table below , if required)*

|  |  |
| --- | --- |
| Subject/Area/ Topic | Technical Notes |
|  |  |
|  |  |

1. **Prerequisites (in terms of knowledge, concepts and material) for doing the Project:**
2. **Material that may be required to make the project and where it might be available**

#### What could the total cost of the project?

1. **Resources available to us:**

**PROJECT SYNOPSIS REPORTON**

**<PROJECTTITLE> SUBMITTD**

**TO**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING FOR**

**INTEGRATED PROJECT(CS203)**

**Submitted By:Name(s):**

**University Roll No(s).:Semester:**

**Session:**

**Index**

|  |  |  |
| --- | --- | --- |
| **Sr.no** | **Topic** | **PageNo** |
| 1 | Problem Statement |  |
| 2 | Title of project |  |
| 3 | Objective & Key Learning’s |  |
| 4 | Options available to execute the project | |
| 5 | Advantages/Disadvantages |  |
| 6 | References |  |

#### Problem Statement

Consider an unbounded (infinite) buffer where producer writes data to buffer and Consumer reads data from the buffer.

There is a need to coordinate the activities of depositing and retrieval performed by producers and consumers, respectively. Develop an application to provide a bounded-buffer solution to the client-server environment

#### Title of project:

To develop a bounded-buffer solution for a client-server environment.

#### Objective & Key Learnings:

* To enable the students to understand the concept of sharing data between client and server machines without loss of any information
* To ensure that the producer won't try to add data into the buffer if it's full and that the consumer won't try to remove data from an empty buffer

## REFERENCES

1. K**rit Somkantha, Nipon Theera-Umpo,** "Boundary Detection in Medical Images Using Edge Following Algorithm Based on Intensity Gradient and Texture Gradient Features."”.
2. H.Chidiac, D.Ziou, “Classification of Image Edges”,Vision Interface’99, Troise-Rivieres,Canada, 1999.pp. 17-24.
3. Q.Ji,R.M.Haralick,“QuantitativeEvaluationofEdgeDetectorsusingtheMinimumKernelVarianceCriterion”,

ICIP99.IEEEInternationalConferenceonImageProcessingvolume:2,1999,pp.705-709

1. M.Woodhall,C.Linquist,“NewEdgeDetectionAlgorithmsBasedonAdaptiveEstimationFilters”,ConferenceRecord of the 31st Asilomar IEEE Conference on SignalsSystems & Computers, volume: 2, 1997, pp. 1695-1699
2. C. Harris and M.J. Stephens. A combined corner and edge detector. In Alvey Vision Conference, pages 147–152,1988.
3. C.Schmid,R.Mohr,andC.Bauckhage.Evaluationofinterestpointdetectors.InternationalJournalofComputerVision,37(2):151–172, June 2000.
4. ThomasB.Moeslund.ImageandVideoProcessing.August2008.

**Annexure II**

**MANUAL FOR PREPARATION OF INTEGRATED PROJECT REPORT**

**(For Project development)**

**(Prescribed Format and Specifications)**

#### GENERALINTRODUCTION:

This document aims to guide students in the preparation of the final project report for the Integrated Project process. It contains information on the stages of the project, indicating when reports are due, how to get something made up in the workshop, and most importantly, how to write concise and legible documents with good literary style, presentation, and layout. It is important to note that each report must be original. Remember, irrelevant information and trivial statements are of no value. It is important not to underestimate the amount of time it takes to write the report.

The manual is intended to provide broad guidelines for the preparation of the integrated project report. In general, the project report, in an organized and scholarly fashion, is an account of the original work of the students, leading to techniques or correlation of facts already known (analytical, experimental, hardware-oriented, etc.) and demonstrating a definite contribution to the advancement of knowledge. It also showcases the student's ability to present the findings in an appropriate manner, with actual accomplishments of the work plainly stated and honestly appraised.

Project reports generally follow the typical structure of scientific and technical research reports: Introduction, Methods, Results, Conclusions, and Recommendations. Although other formats are acceptable, most readers anticipate this format and get their bearings most quickly when it is followed. The following template adopts this standard organizational structure. The headings are those recommended for your own project report, but you may have to make occasional deviations from this template to adapt to the needs of your own project.

**Number of Copies to be Submitted for Evaluation:**

The candidate’s group is required to prepare one copy of the report, which he/she is required to submit to the IP in charge. The report must be prepared strictly in accordance with the specifications set out below.

#### ARRANGEMENT OF CONTENTS OF PROJECT REPORT:

**The sequence in which the training report material should be arranged and bound is as follows:**

1. Coverpage(samplecopyattachedasannexure-A).
2. Titlepage(sample copyattachedasannexure-B).
3. Certificate(samplecopyattached asannexure-C).
   1. Declaration(samplecopyattachedasannexure-D)
   2. Abstract(Abriefsummaryabouttheprojectwithkeywords)
   3. Acknowledgment(samplecopyattachedasannexure-E)
   4. Contentswithtitle&subtitle,pageno.(Breakupofsectionsaccordingtoexplanationisadvised).
   5. ListofFigures
   6. ListofTables (ifany)
   7. Notations(ifany)
   8. Executivesummary(withChapters&sectionsasannexure-F)
   9. Appendix/Annexure/References\*(ifany)

#### TEXTPROCESSINGINFORMATION

It is important to note that type format of all reports should be uniform. So there is a need to follow someguidelineson typesetting and otheraspects. Some ofsuch guidelinesaregiven below.

1. Thereportshallbetypedon75or80 gr./m2whitepaper.SizeofpapershallbeA4.
2. Only Laser printer and Ink Jet printer outputs are acceptable to maintain clear and high contrastconstantdensity copy throughout thereport.
3. As a character font, one should use Times New Roman, Courier, Helvetica or equivalent which areavailable in most word processors. The font size must be 12 point in the text and at least 8 point in thefigures.
4. Whenevertitlesandheadingsaretobecenteredthecenteringshallbesuchthat112mm.fromtheleftedgeofthepaper or98 mm.forthe rightedgeofthepaper isthe centerpointof thetitleor heading.
5. Marginsofpagesshallconformtothefollowingspecifications.
   1. Leftmargin-3 1/2cm. fromedgeofpaper.
   2. Rightmargin-2cm. from edgeof paper.
   3. Topmargin-3 1/2cm.from edgeof paper.
   4. Bottommargin-2 cm.from edgeofpaper.

Theabovemarginsshallbeobservedoncharts,graphs,tables,anddrawings.Folded paperswillnotbeacceptedunlessthereis absolutely no otherway for thematerial to bepresented.

1. Spacingofthetextmaterialshall be1.5withthefollowing exceptions:
   1. Footnotes-singlespacing
   2. Longbiographicalquotes-singlespacing
   3. Extensivequotations -singlespacingandindentedeight(8)spacesrelativetothetextmaterial.
2. Headingsusedinthereportshallconformtothe followingrules:
   1. ChapterHeadings-CHAPTER1,CHAPTER2,CHAPTER3etc.
      1. MustbeginanewpageandbecenteredusingtheFontSize18withBoldFold.Omitperiodat theend of theheading.
      2. Mustbetypedinuppercaseletters.
      3. Chapterheadingsaretobetitlednames thatreflectcontentofthetext thatfollows.
   2. SecondHeadings -2.1, 2.2,2.3,etc.
      1. Must be towards left margin and be typed in capital and lower case letters; i.e., the firstletter of each word except conjunctions, prepositions, and articles must be a capital letter.Omitperiod at theend ofheading.
      2. The letter designationof theheadingshallbefollowedbya periodandtwoblankspaces.
      3. Mustbethreespacesbelowprecedingtextandtwospacesaheadofsucceedingtext.
      4. FontSizetobeused is14withBold Face.
      5. In case it is found that first line of the succeeding text starts from the next page, then thisheadingshould start from thenext pageusing pagebreak.
3. **Figures and Tables**: Ideally, every result claimed in the text should be documented with data,usually data presented in tables or figures. If there are no data provided to support a given statement ofresult or observation, one should consider adding more data, or deleting the unsupported "observation."Examinefigure(s)or table(s)pertaining to theresult(s).

Authorsshouldassesswhether:

1. Thedatasupportthetextualstatement
2. Thedatacontradictthetextual statement
3. Thedata areinsufficientto prove

The actual figures and tables should be embedded/inserted in the text, generally on the page followingthe page where the figure/table is first cited in the text. All figures should be numbered and citedconsecutively in the text as Figure 2.1, Figure 2.2, to indicate the first and second figures in Chapter 2respectively. Similarly it is the case with tables such as Table 3.1, Table 3.2, etc. A caption for eachfigureandtableistobegivenwithpropercitationaboutreference,datasources,etc.andbyhighlighting the key findings. One should include an index figure (map) showing and naming alllocations discussed in the report. Author is always encouraged to make his own figures, includingcartoons, schematics or sketches that illustrate the derived processes. He should see all his figureskeepingin mind that:

1. Eachfigureisself-explanatory.
2. Axesoffiguresarelabeledandtheunits,ifused,areindicated.
3. Uncertaintyisshownindatawitherrorbars.
4. Redundantdatainkmustbe eliminated.
5. Anefforthastobemadetoincreasedatadensitybyeliminatingnon-databearingspace.
6. Whetherdataissparsesetthatcouldbetterbeexpressedasatable.
7. Whetherthe figuredistortsthedata inanyway.
8. Whetherthe data arepresented in context.

Figures should be oriented vertically, in portrait mode, wherever possible. If they must be orientedhorizontally, in landscape mode, so that one can read them from the right, not from the left, where thebindingwill be.

1. **Pagination:**Eachpageinthereportordissertationisexpectedtobearanumber.Onlyonesideofthepaper may beused. Thefollowing plan should beused exclusively:

a. The preliminary section, including the title page; copyright page, if any; foreword, preface, oracknowledgements; table of contents; etc., should be numbered, using lower case Roman Numerals,e.g.,i, ii,iii, etc. ThetitlepagecountsasPagei,but the numberdoesnotappear. Thesequenceof the

preliminarysectionisas follows:

TitlePage Pagei-numberdoesnot appear

Declaration. Pageii

Certificate. Pageiii

Acknowledgements. Pageiv

Abstract. Pagev

TableofContents. Pagevi

Listof Tables. Pagevii

ListofFigures. Pageviii

Listof Symbols. Pageix

For the remainder of the report, numbers are used. Each page must be numbered. Page numbers are tobe placed 2 centimeters from the top and right-hand margins on the pages. All pages for illustrations,tables,appendices,bibliography,etc.areincluded.Useofsuffixes,suchas25a,25bisnotallowed.

The numbering in the main body should begin with Page 1 and run consecutively to the last page. Nopunctuation,suchasdashoraperiod, shouldaccompanythepagenumber.

1. **SizeofReport**:Theprojectreportshouldbecompleteinallrespect.Howeveritisexpectedthatthe number of pages in the report will range 40-50 pages of typed matter reckoned from the First pageof Chapter1 to thelast pageof theAppendix.

#### BindingSpecifications:

The project must be Black Cardboard Bounded with Lamination Sheet. (Spiral binding and other formsofbinding will not beaccepted)

#### PREPARATIONFORMAT:

Thissectionexplains the purposeandcontentsof eachsectionoftheReport.

#### Cover

The Cover should contain the title of the project, followed by the date of submission, and then followedby the names and affiliations of the submitters, all of which should be centered in the page. The Covermaybeprinted oncolored paper ofslightly heavier stock.

#### TitlePage

Useaformat similartothoseusedforprojectupdatepresentations.

#### Abstract

The Abstract is a succinct statement that comprises the essential content of the Project Report. It will betechnical in nature, intended for reading by an engineer or computer scientist. The Abstract summarizesthe results of the design project without explaining why design decisions were made, or justifying thefindings.

#### Acknowledgments

The Acknowledgments should recognize the assistance given by the liaison at the sponsoring company,the project faculty advisor, the institutional support, and any other individuals who rendered significantassistance.

#### TableofContents,ListofFigures,ListofTables

The Table of Contents, List of Figures, and List of Tables should be self-explanatory, and most modernwordprocessorscan generate themforyou.

#### INTRODUCTION

**StatementoftheProblem**

This section can usually be reproduced directly from your proposal, completed at the end of fall term.The purpose of this section is to listen to the needs of the sponsoring company and to show that youunderstandthe problemfrom theirperspective.

#### Background

This section, too, can be taken directly from your proposal unless new or revised information gives youareasontochangeit.

#### PurposeofProjectandOverviewofProject Report

Summarize the purpose of your project in one or two sentences: “The purpose of this project was todevelopaneffectivemeansofsolvingproblemABCbydesigningdeviceXYZ.”Yourpurposestatement is simply an expansion of your title into sentence format. Following your purpose statement,give a

statement which describes the shape or structure of the rest of the Project Report. When readers cananticipate the shape of what is coming they can devote full attention to the content. This section followstheadvice “Lay out thewholebeforepresenting the parts.”

#### METHODSANDDESIGNAPPROACH

Your purpose in this section is to show the logic in the way that your team attacked the problem. Yourgoal here is to explain the sequence of problem-solving steps that your team went through. Show yourclear engineering thinking when describing yourmethods.

#### RESULTS

The purpose of this section is to describe in detail the actual device or product you produced. Thenumber of subheadings of this section depends on the complexity of your product and on the kinds ofinformation that you think your sponsoring company will need to know. Group your explanations bycategory and give each category a clarifying heading. Here are some typical headings that will fit mostprojects.

#### Specifications

Tellwhatyourdevicedoesatwhatlevelsofprecision.

#### ConstructionMethods

Explainhowyourdevice ismade,whatitsmaterials are,etc.

#### Operation

Explainhow yourdeviceworks; makeyourinstructions clearto anewuser.

#### TestingandCalibration

Howdid youtestyourdeviceand howdid youcalibrate it?

#### ExternalConstraints

Thereportmustaddresseconomic,environmental,sustainability,manufacturability,ethical,healthandsafety, social, and political constraintsoftheproject.

#### CONCLUSIONS

From a managerial standpoint, this is probably the most important section of your Project Report.Technical and business managers frequently read this section of the Project Report first even though itcomes near the end of the document! Your goal here is to evaluate your original criteria. How well doesyour product actually work? Does it solve the problem that the company wanted solved? Be candid andhonest here. What are the weaknesses and limitations of your product? What parts of the originalproblemweremoredifficult than anticipated? What hopes foryour solutiondidn’t turn out?

In short, this section may say, “We solved part of your problem but not other parts,” or “Our solutionfinallydidn’t work, andwedidn’t solveyourproblemat all.”

The people who read the Conclusions and Recommendations sections of your Project Report are powerpeople inside their company! In light of your conclusions, what recommendations do you have for thecompany? Shouldthey beginimmediate production of your prototype? Shouldthey do further testingof your prototype? Should they put out an RFP for further research? Should they do a market study?Should they look for more cost effective ways of building a device similar to your prototype? Much ofyourfuturereputation asadesignteamrests on recommendations.

#### REFERENCES

FollowtheProjectProposalguidelines.

#### APPENDICES

Appendices can follow where you did in the original proposal with suggestions from your facultyadvisor.

**(AnnexureA)**

### INTEGRATEDPROJECTREPORT

**On**

# NAMEOFTOPIC

Submitted in partial fulfilment of the requirement for theCourseIntegrated Project (CS 203)of

**COMPUTERSCIENCEANDENGINEERING**

**B.E. Batch-2021in**

**JUNE-2025**



|  |  |
| --- | --- |
|  | **SubmittedBy** |
| **UndertheGuidanceof** |  |
| **Nameof theProjectGuide** | **NameoftheStudent** |
| **DesignationoftheProjectGuide** | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |

**DEPARTMENTOFCOMPUTERSCIENCEANDENGINEERING**

# CHITKARAUNIVERSITY

**PUNJAB**

**(AnnexureB)**

**INTEGRATEDPROJECTREPORT**

**On**

# NAMEOFTOPIC

SubmittedinpartialfulfilmentoftherequirementfortheCourse Integrated Project (CS 203)of

**COMPUTERSCIENCEANDENGINEERING**

**B.E. Batch-2021in**

**JUNE-2025**



|  |  |
| --- | --- |
|  | **SubmittedBy** |
| **UndertheGuidanceof** |  |
| **Nameof theProjectGuide** | **NameoftheStudent** |
| **DesignationoftheProjectGuide** | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |
|  | **NameoftheStudent** |
|  | **Roll.No.** |

**DEPARTMENTOFCOMPUTERSCIENCEANDENGINEERING**

# CHITKARAUNIVERSITY

**PUNJAB**

**CERTIFICATE**

*(16TimesNewRoman)*

This is to be certified that the project entitled “Title of the Major Project” has been submitted for the Bachelorof Computer Science Engineering at Chitkara University, Punjab during the academic semester January 2025-May-2025 is a bonafide piece of project work carried out by “Name’s and roll no’s of the students group”towards the partial fulfillment for the award of the course Integrated Project (CS 203) under the guidance of“ProjectGuideName” and supervision.

**Sign.of Project Guide** :Name of Project Guide(Designation&Department)

**CANDIDATE’SDECLARATION**

*(16TimesNewRoman)*

We, **NAME AND Roll No’s OF THE STUDENTS GROUP,** B.E.-2021 of the Chitkara University, Punjabhereby declare that the Integrated Project Report entitled **“TITLE OF PROJECT”** is an original work anddata provided in the study is authentic to the best of our knowledge. This report has not been submitted to anyotherInstituteforthe award ofany other course.

|  |  |  |
| --- | --- | --- |
| **Sign.of Student1** | **Sign.of Student2** | **Sign.of Student3** |
| NameoftheStudent | NameoftheStudent | NameoftheStudent |
| IDNo……………. | IDNo…………….. | IDNo…………… |

**Place: Date:**

**ACKNOWLEDGEMENT**

*(16TimesNewRoman)*

Itisourpleasuretobeindebtedto variouspeople, whodirectlyorindirectlycontributedin thedevelopmentofthiswork and whoinfluenced my thinking, behaviorand acts duringthe courseofstudy.

Weexpressoursinceregratitudetoallforprovidingmeanopportunitytoundergo IntegratedProjectasthepartofthe curriculum.

Wearethankfulto“ProjectGuideName”forhissupport,cooperation,andmotivationprovidedtousduring

thetrainingforconstantinspiration,presenceandblessings.

We also extend our sincere appreciation to ***“Project Guide name and External Guide name (if any)*** whoprovidedhisvaluablesuggestions andprecioustime inaccomplishingourIntegratedprojectreport.

Lastly,Wewouldliketothankthealmightyandourparentsfortheirmoral supportandfriendswith whomwesharedourday-to day experienceandreceived lotsof suggestionsthat improveour qualityof work.

|  |  |  |
| --- | --- | --- |
| **NameoftheStudent** | **NameoftheStudent** | **NameoftheStudent** |
| **IDNo…………….** | **IDNo……………..** | **IDNo……………** |

#### Thereportmustconsistoffollowingchapters:

1. **Abstract/Keywords**

#### Introductiontotheproject

* 1. **Background**

#### ProblemStatement

1. **SoftwareandHardwareRequirementSpecification**

#### Methods

* 1. **Programming/WorkingEnvironment**

#### Requirementstoruntheapplication

1. **DatabaseAnalyzing,designandimplementation(Ifany)**
2. **Program’sStructureAnalyzingandGUIConstructing(ProjectSnapshots)**

#### Code-ImplementationandDatabaseConnections(Ifany)

1. **SystemTesting(ifany)**

#### Limitations(if any)

1. **Conclusion**

#### FutureScope

1. **Bibliography/References**

**AnnexureIII(ForResearchproposal)**



### A

**Researchproposal**

on

### Titleoftheproposedresearchwork

(TimesNewRoman24size,Bold)

Submittedto

### ChitkaraUniversity,Punjab

by

### NameoftheStudent(s)

(Times new roman 20 size, Bold)RollNo:

### Underthesupervisionof

**NameofGuide**

CompleteAffiliation

**Abstract(**Timesnew roman 12 size, bold).. . .. . . .. .. . . . .. . . .. . ..………… **i**

(Abstractshouldnotbemorethen500words,minimum300words)

**Tableof Contents**.. .. . . .. .. . . . . ... . . . ... . . . .... . . . .. . .……… **ii**

**Listof Figures**. . . . .. . . .. . . .. . . . .. . . . . .. . . .. ... . . . . . . .………. **iii**

**Listof Tables**.. . .. . . .. ... . . . . .. .. . . . ... . . . . ... . . . . .. .………. **iv**

1.Introduction[Times newroman, size 16, bold]. . . .. . . . . .. . .. . . . . .. . . 1

1.1Section 1 [Times new roman,size 14,bold]. . ... .. . . . . . . . .. . . . . .. .

1.1.1.Sub-section[Timesnew roman,size 12,bold]........................... 3

1.1.2.Sub-section . .. . . . .. . . . . . . . ..

1.1.3. Sub-section. .. . . . .. . . . . . . . .. 5

…………………….

1.2 Section2. . . . .. . . . . ... . . 6

……………………..

2. Literature Review . . .. .. . . . . . . ... . . . . ... . . . .... . . . . ..

2.1Tools and Technologies. . . . . . .. .. . . . . .………………… ..

………………………

1. JustificationforResearch.............
   1. Motivation........

3.2 Research Gaps .. .. . . .. .. . . . . ... . . . ... . . . .... . . .. . ..

4.ProblemStatement... ... .. . .. . . .. . ..(minimium5-6 lines) .. .. . ... . .. .

5.ExpectedOutcomes

**References** . . . . ... . . . .... . . . . .. .. . . . ... . . .

1. **Introduction(1000-1500words)**[Timesnewroman,size16,bold]
   * Theintroductionsectionshouldintroducetobackgroundoftheresearcharea
   * Thekey issueisto state:
     + Theoverallresearchproblem,whichisdiscussedduringtheentirethesisprocess
     + Specificresearchquestions:
       - Between1-3separatequestionsconnectedtoresearchproblemarea
       - Shouldbeformulatedinaveryclear languageinaformofaquestion
     + Research question has a strong connection to method part. Generally, there aretwotypesofquestions,whichdefineverymuchtheappliedresearchmethodology:
       - Descriptive–Howthingsare?
       - Normative–Howthingsshouldbe?
   * In the introduction part, the applicant may briefly describe what the previous stages oftheresearchare.
   * Ifthereis subsection then itmay bearrangedas1.1, 1.2,1.3, etc.
2. **LiteratureReview**[Timesnewroman,size16,bold]
   * This section is a literature review with a lot of references. The author lists recentliterature dealing with the area and shows that he or she is already familiar with theproblemdomain.
   * Literaturemustbegivenincontinualmannerandchronologicalorder.***Groupsentences that express and develop one aspect of your topic and may use a newparagraph for another aspect/ topic.****(no need to give literature in tabular form here,however if author want, he/she can summarise all the literature review in one pagetabular form)*
   * **Tools and technologies** –from literature review, the author should describe how andwhattools/technologieshavebeenusedintherelatedresearch(existingtools/technologiesused by other peer groups).
3. **JustificationforResearch**[Timesnewroman,size16,bold]
   1. **Motivation**[Timesnewroman,size14]

This isa short section justifying the research problem area. Basically, the authorstates on this part why the research is important and**what challenges are there inthearea ofresearch**for:

* + - theresearch community
    - technicalimplicationsfortheindustry
    - national/economic/Technicalcompetitiveness
  1. **ResearchGaps**[Timesnewroman,size14,bold]
  + The researcher identifies several **research gaps** based on the literature survey and theproblemstatementidentified,whichshouldbethe basisforsettingupobjectives.
  + This part may include references to journals,conferences and newspaper articlespinpointing the importance of the research area. Also estimations of economic and ortechnicalvalueof solvingtheproblem maybestated.

1. **Problem Statement** [Times new roman, size 16, bold]Giveabrief problemstatement here.
2. **ExpectedOutcomes** [Timesnewroman,size16, bold]

#### Resultsintheacceptanceofresearchpaper.

* + Statebriefly(5-10lines)whattheexpectedoutcomesoftheresearchareandwhatwillbethe significanceofpotential results.

1. Contributionsfortheresearchcommunity
2. Potentialnewtechnicalimplications etc.

**References (fromseparatepage)**[Timesnewroman,size16,bold]

Listkeyreferenceshereforyourstudy,allthesemusthavebeencitedproperlyandappropriately in to the text of the research proposal. Make sure these references are up-to-date. The style of all the references (authors, dates, titles, edition, elace, publisher, fonts &margins etc) must be same for all the references. There are several possible ways to organizethissection.Youcanuseeitherofthereferencingsystems,alphabetical(Harvard)ornumerical(Vancouver).

* + **StandardHarvardstyle-**Thereferencelistattheendofyourproposalusingthissystemshould be in alphabetical order.
  + Examplesfromjournalin Harvardreferencestyleforsingleauthorandtwoauthors:

Kozulin,A.,1993,'Literatureasapsychologicaltool',*EducationalPsychologist*28(3),253-

265.

Lamb, R. & Kling, R., 2003, 'Reconceptualizing users as social actors in information systemsresearch',*MIS Quarterly*27 (2), 197.

* **Numerical system -** You should number your references sequentially through the text.The numbers should be given in square brackets and one number can be used to refer toseveral instances of the same reference. The reference list at the end of the researchproposalshould be numerical order.

***The style (authors, titles, edition, place, publisher, fonts & margins etc) of all referencesmust be uniform all over and be cited properly (may be given first author’s family namefollowed by et al) in to the text. If there are more references for one aspects, referencesshouldbe written insingle bracket as [5,7, 8, 10-14, 17-22,etc].***