**PROJECT REPORT**

**On**

**OS Services**

Submitted to Centurion University of Technology& Management

In partial fulfillment of the requirement for award of the degree of

**B. TECH.**

**In**

**COMPUTER SCIENCE & ENGINEERING**

**Submitted By**

**Purnima Lal-160301120034**

**Biswajit Behura-160301120052**

**Soumya Samar Brahma-160301120054**

**Ankita Singh-160301120055**

**Punyabrat Rath-160301120057**

**Under the Guidance of**

**Rajkumar Mohanta**

To

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**DEPT. OF COMPUTER SCIENCE & ENGINEERING**

**SCHOOL OF ENGINEERING &TECHNOLOGY,**

**CUTM, Jatni-752050**

**March 2019**

**PROJECT REPORT**

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**CERTIFICATE**



This is to be certified that the project entitled “OS SERVICES (Vinaya)” has been submitted for the Bachelor of Technology in Computer Science Engineering of School of Engineering&Technology, CUTM, Jatni during the academic year 2018-2019 is a persuasive piece of project work carried out by “Purnima Lal,Biswajit Behura,Soumya Samar Brahma,Ankita Singh and Punyabrat Rath” towards the partial fulfillment for award of the degree (B.Tech.) under the guidance of “Rajkumar Mohanta” and no part thereof has been submitted by them for any degree to the best of my knowledge.

Signature of HOD Signature of Project Guide

**Dr. Anurag Kashyap Rajkumar Mohanta**

Signature of Coordinator

**Mr. Rakesh Ray**

**EVALUATION SHEET**

1. Title of the Project: OS SERVICES(VinayA)
2. Year of submission:2019
3. Name of the degree:Btech
4. Date of Examination / Viva: 18th March 2019
5. Student Name with Regn No.:Purnima Lal-160301120034

Biswajit Behura-160301120052

Soumya Samar Brahma-160301120054

Ankita Singh-160301120055

Punyabrat Rath-160301120057

1. Name of the Guide:Rajkumar Mohanta
2. Result: [APPROVED/REJECTED]

Signature of HOD Signature of Project Guide

**Dr.Anurag Kashyap**  **Mr.** Rajkumar Mohanta

Signature of Coordinator

**Mr. Rakesh Ray**

Signature of External Examiner

**CANDIDATE’S DECLARATION**

We,Purnima lal,Biswajit Behura,Soumya samar Brahma,Ankita Singh,Punyabrat RAth B.Tech.in CSE (Semester- VI) of School of Engineering &Technology, CUTM, Jatni, hereby declare that the Project Report entitled “OS SERVICES(Vinaya)” is an original work and data provided in the study is authentic one. This report has not been submitted to any other Institute for the award of any other degree by me.

**Signature of Student**

Purnima Lal-160301120034 Biswajit Behura-160301120052

Soumya Samar Brahma-160301120054

Ankita Singh-160301120055

Punyabrat Rath-160301120057

**Place: Jatni**

**Date: 18 March 2019**

**ACKNOWLEDGEMENT**

It is my pleasure to be indebted to various people, who directly or indirectly contributed in the development of this work and who influenced my thinking, behavior and acts during the course of study.

I express my sincere gratitude to ***Mr. Prashant Mohanty***, worthy Dean for providing academic support &opportunities.

I am thankful to Mr. Rajkumar Mohanta for his support, cooperation, and motivation provided to me during the training for constant inspiration, presence and blessings.

I also extend my sincere appreciation to ***Dr. Anurag Kashyap****,* HoD who provided his valuable suggestions and precious time in accomplishing my project report.

I extend my sincere appreciation to ***Mr.Rakesh Ray***, Coordinator who provided hisvaluable suggestions and precious time in accomplishing my project report.

Lastly, I would like to thank the almighty and my parents for their moral support and friends with whom I shared my day-to-day experiences and received lots of suggestions those improved the quality of work.

**The report must consist of following chapters:**

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| 1. **Introduction to the Project** |
| * 1. **Background** |
| * 1. **Problem Statement** |
| 1. **Software Requirement Specification (SRS)** |
| * 1. **Methods** |
| * 1. **Programming Environment** |
| * 1. **Requirements to run the application** |
| 1. **Database Analyzing, design and implementation&Data Flow Diagram (If any)** |
| 1. **Program’s Structure Analyzing and GUI Constructing** |
| 1. **Code-Implementation and Database Connections (If any)** |
| 1. **Limitations** |
| 1. **Conclusion** |
| 1. **Bibliography/References** |

Introduction of The Project

In this project, a free, educational software is proposed to demonstrate and verify basic Operating System Concepts such as Process Scheduling, Process Synchronization, Deadlock and Page Replacement Algorithms along with designing a Website where the software and its documentation is available to be downloaded by the general public.

This software aims to transform the theory of above topics into programmable code so as to graphically represent the concepts. As well as test and compare the results for each simulation. The software provides graphical aid to the user to perform- scheduling of processes to view turnaround time, waiting time and Gantt chart (FCFS, SJF, RR, Priority), simulation of Producer and Consumer Problem to see use of buffer and synchronization, testing on a process sequence for deadlock (Banker’s Algorithm) and implementation of FIFO, LRU and Optimal page replacement algorithm on a page sequence. The website will be the medium of access to the software; it is dynamic and also provides information on how to use the software. Users can provide feedback and updates and bug fixes can be released on the website.

Background:

This project is designed to know about the content of Operating System concepts like-Process Scheduling, Banker’s Algorithm, Page replacement algorithm, Process Creation and Producer Consumer Problem. It is Desktop application that Graphically represents the concept of Operating system.

Problem statements:

To develop a free educational software using java and java swing to demonstrate and verify basic OS concepts such as ;

i)Process creation

ii)Process scheduling (fcfs,sjf,priority,rr)

iii)Process Synchronisation (producer consumer problem)

iv)Dead lock(banker’s algorithm)

v)Page replacement algorithm (lru,optimal,fifo)

Programming Environment:

Netbeans

Brackets

Requirement to run the application:

Netbeans

Any Browser(to download the user manual and application)

Conclusion:

After 3 months of hard work during this semester when we start the project we have gained a lot of knowledge and experience about many things like how to work in a team.How to work under pressure.we also learn about many new things like how to use netbeans , Brackets, how to make reports for the projects etc.

Bibliography:

For the all the knowledge and experience that we gained during the creation of project, we student of CSE-A 3rd Year would like to thank our college and guide Mr.Rajkumar Mohanta for his full suppoert and help during the creation of project. At last but not the least we would like to give my gratitude to my mentor Mr. Rjkumar Mohanta of our college for his support during the creation of project.

THANKING YOU ALL