

**A**  
**PROJECT REPORT**  
**ON**  
**“DYNAMIC QUERY FORM FOR**  
**DATABASE QUERY”**

**SUBMITTED TO**  
**SHIVAJI UNIVERSITY,**  
**PARTIAL FULFILLMENT OF REQUIREMENT FOR THE AWARD OF BACHELOR**  
**DEGREE IN COMPUTER SCIENCE AND ENGINEERING.**

**SUBMITTED BY**

**AISHWARYA JAIN**  
**VIRAJ PATIL**  
**AISHWARYA SHAH**  
**VAIBHAV UPADHYAY**  
**RAHUL BHAT**

**13CMPN15**  
**13CMPN44**  
**13CMPN52**  
**13CMPN59**  
**08CMPN61**

**UNDER THE GUIDANCE OF**  
**PROF. MR. K.S. KADAM (M.E)**



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING,**  
**TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJII**  
**(AN AUTONOMOUS INSTITUTE)**  
**(A+ Grade Accreditation by NAAC)**  
**(ISO 9001:2015 CERTIFIED)**

**2016-2017**

**D.K.T.E.SOCIETY'S**

**TEXTILE AND ENGINEERING INSTITUTE, ICHALKARANJI**

**(AN AUTONOMOUS INSTITUTE)**

**(A+ Grade Accreditation by NAAC)**

**(ISO 9001:2015 CERTIFIED)**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**



Promoting Excellence in  
Teaching, Learning & Research

# **CERTIFICATE**

**THIS IS CERTIFIED THAT PROJECT WORK ENTITLED “DYNAMIC QUERY FORM FOR DATABASE QUERIES” IS A BONAFIDE RECORD OF PROJECT WORK CARRIED OUT IN THIS COLLEGE BY**

**AISHWARYA JAIN**

**13CMPN15**

**VIRAJ PATIL**

**13CMPN44**

**AISHWARYA SHAH**

**13CMPN52**

**VAIBHAV UPADHYAY**

**13CMPN59**

**RAHUL BHAT**

**08CMPN61**

**IN THE PARTIAL FULFILLMENT OF REQUIREMENT FOR FOUR YEAR DEGREE COURSE IN COMPUTER SCIENCE & ENGINEERING PRESCRIBED BY SHIVAJI UNIVERSITY KOLHAPUR, FOR THE ACADEMIC YEAR 2016-2017.**

**PROF. MR. K. S. KADAM**

**(PROJECT GUIDE)**

**PROF. (DR.) D.V.KODAVADE**

**(HOD CSE DEPT.)**

**EXAMINER**

**(EXTERNAL)**

**PROF. (DR.) P.V.KADOLE**

**(PRINCIPAL)**

# DECLARATION

We hereby declare that, the project work report entitled “**DYNAMIC QUERY FORM FOR DATABASE QUERIES**” which is being submitted to D.K.T.E. Society’s Textile and Engineering Institute Ichalkaranji, affiliated to Shivaji University, Kolhapur is in partial fulfillment of degree B.E.(CSE). It is a bonafide report of the work carried out by us. The material contained in this report has not been submitted to any university or institution for the award of any degree. Further, we declare that we have not violated any of the provisions under Copyright and Piracy / Cyber / IPR Act amended from time to time.

**AISHWARYA JAIN**

**13CMPN15**

**VIRAJ PATIL**

**13CMPN44**

**AISHWARYA SHAH**

**13CMPN52**

**VAIBHAV UPADHYAY**

**13CMPN59**

**RAHUL BHAT**

**08CMPN61**

## ACKNOWLEDGEMENT

With great pleasure we wish to express our deep sense of gratitude to Prof. Mr. K. S. Kadam for his valuable guidance, support and encouragement in completion of this project report.

Also, we would like to take opportunity to thank our H.O.D. Prof. (Dr.) D. V. Kodavade for his co-operation in preparing this project report.

We feel gratified to record our cordial thanks to other staff members of CSE Department for their support, help and assistance which they extended as and when required.

Thank you,

Aishwarya Jain	13CMPN15
Viraj Patil	13CMPN44
Aishwarya Shah	13CMPN52
Vaibhav Upadhyay	13CMPN59
Rahul Bhat	08CMPN61

## ABSTRACT

Modern scientific databases and web databases maintain large and heterogeneous data. These real-world databases contain over hundreds or even thousands of relations and attributes. Traditional predefined query forms are not able to satisfy various ad-hoc queries from users on those databases. This paper proposes DQF, a novel database query form interface, which is able to dynamically generate query forms. The essence of DQF is to capture a user's preference and rank query form components, assisting him/her to make decisions. The generation of a query form is an iterative process and is guided by the user. At each iteration, the system automatically generates ranking lists of form components and the user then adds the desired form components into the query form. The ranking of form components is based on the captured user preference. A user can also fill the query form and submit queries to view the query result at each iteration. In this way, a query form could be dynamically refined till the user satisfies with the query results. We utilize the expected F-measure for measuring the goodness of a query form. A probabilistic model is developed for estimating the goodness of a query form in DQF. Our experimental evaluation and user study demonstrate the effectiveness and efficiency of the system.

# INDEX

## **INDEX**

<b>1. Introduction</b>	<b>01</b>
a. Problem definition	03
b. Aim and objective of the project	03
c. Scope and limitation of the project	04
d. Timeline of the project	04
e. Project Cost	06
<b>2. Background study and literature overview</b>	<b>07</b>
a. Investigation of current project and related work	08
b. Literature overview	10
<b>3. Requirement analysis</b>	<b>12</b>
<b>4. System design</b>	<b>15</b>
a. Architectural Design	16
b. User Interface Design	17
c. System Modeling	18
1. Class Diagram	18
2. Dataflow Diagram	18
3. Sequence Diagram	19
4. Collaboration Diagram	20
5. Use Case Diagram	21
6. Activity Diagram	22
7. Deployment Diagram	22
c. Algorithmic description of each module	23
<b>5. Implementation</b>	<b>25</b>
a. Environmental Setting for running the project.	26
b. Detailed Description of Modules	26
<b>6. Integration and Testing</b>	<b>28</b>
a. Description of the Integration Modules	29
b. Testing	29
<b>7. Performance Analysis</b>	<b>31</b>

<b>8. Applications</b>	<b>33</b>
<b>9. Installation Guide and User Manual</b>	<b>35</b>
<b>10. Declaration of Ethics</b>	<b>42</b>
<b>11. References</b>	<b>44</b>



