PBIGE

(Pattern Based Image Generating Engine)

Developed by:

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Islamabad (2003).

بسم الله الرحمن الرحيم

Bahria Institute of Management & Computer Sciences,
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September 25, 2003

Final Approval

It is certified that I have read the project titled "**PBIGE**" submitted by Ali Abbas. It is my judgment that this project is of sufficient standard to warrant its acceptance by Behria University for the Master degree in computer sciences.

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DECLARATION

I, hereby declare that "PBIGE" software, neither as a whole nor as a part thereof has been copied out from any source. It is further declared that I have developed this software and the accompanied report entirely on the basis of my personal efforts made under the guidance of kind supervisors. No portion of the work presented in this report has been submitted in support of any application for any other degree or qualification of this or any other university or institute, if found I will stand responsible.

Ali Abbas

DEDICATED TO

Our parents

For their love, prayers and much more...

&

Our teachers

For their valuable guidance, assistance and much more…

ACKNOWLEDGEMENTS

First of all I am thankful to Almighty ALLAH (SWT) most compassionate and most merciful, without his blessings completion of this project was not possible.

Then is the place of my respected supervisor Mr. Zarrar Javaid. His all time appreciation has been the motivating force behind the successful completion of this software. He has been very kind and extra ordinarily cooperative to us during the whole process of development.

I also thank to our great friend in masters of computer sciences who have been a source of support, encouragement and motivation during the whole academic and development period.

Above all I owe this success of mine to my loving parents without whose pure prayers, true encouragements, moral, and financial support I would never have succeeded.

Ali Abbas

A DISSERTATION SUBMITTED TO THE
DEPARTMENT OF COMPUTER SCIENCE
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AS
A PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR THE AWARD OF DEGREE OF
MASTER OF COMPUTER SCIENCE

PROJECT IN BRIEF

Project Title:	PBIGE
Objective:	To develop a pattern based application that will be used for imaging generation.
Undertaken By:	Ali Abbas
Supervised By:	Zarrar Javaid
Controlled By:	Zarrar Javaid
Verified By:	Tahir Mahmood
Version:	1.0.00
For:	BIMCS (Bahria Islamabad)
Tools & Technologies:	Visual C++
Operating System:	Windows 2000 professional.
Date Started:	April 25, 2003
Date Completed:	September 29, 2003
System Used:	Pentium-3

ABSTRACT

The PBIGE (Pattern Based Image Generating Engine) is the most sophisticated software that works like a virtual artist as designer. PBIGE standalone windows based Scientist application that has been developed to fill the needs of the textile industry. The product idea is based on the study of two mathematical algorithms; **Julia Set** and **Mandelbrot** set.

Both of the algorithms acquire the complex numbers as user input and create the pattern to the scale co-ordinates. As the user has been given the options, so one can change the number of inputs dynamically for the Scale and can view the different patterns with different color schemes. Hence thousand numbers of the patterns with different colors can be generated with PBIGE.

After the study of the complex number in the context of pattern or image I have developed own self defined algorithms and made it as the part of the software.

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