B.Sc. in Computer Science and Engineering Thesis

Title of Your Thesis We Tested a Very Very Long Title to See What Happens in This Case Then We Made it Longer and We Can Make It Even Longer Than Longer

Submitted by

First Thesis Student Name
201414099

Second Thesis Student Name
201414150

Third Thesis Student Name
201414200

Supervised by

Supervisor Name

Department of Computer Science and Engineering
Notre Dame University Bangladesh

Dhaka, Bangladesh

May 2019

CANDIDATES' DECLARATION

This is to certify that the work presented in this thesis, titled, "Title of Your Thesis We Tested a Very Very Long Title to See What Happens in This Case Then We Made it Longer and We Can Make It Even Longer Than Longer", is the outcome of the investigation and research carried out by us under the supervision of Supervisor Name.

It is also declared that neither this thesis nor any part thereof has been submitted anywhere else for the award of any degree, diploma or other qualifications.

First Thesis Student Name
201414099

Second Thesis Student Name
201414150

Third Thesis Student Name
201414200

CERTIFICATION

This thesis titled, **"Title of Your Thesis We Tested a Very Very Long Title to See What Happens in This Case Then We Made it Longer and We Can Make It Even Longer Than Longer"**, submitted by the group as mentioned below has been accepted as satisfactory in partial fulfillment of the requirements for the degree B.Sc. in Computer Science and Engineering in May 2019.

Group Members:

First Thesis Student Name

Second Thesis Student Name

Third Thesis Student Name

Supervisor:

Supervisor Name
Supervisor Designation
Department of Computer Science and Engineering
Notre Dame University Bangladesh

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First Thesis Student Name

Second Thesis Student Name

Third Thesis Student Name

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ABSTRACT

Thesis abstract

Chapter 1

Introduction

This chapter is for your introduction.

1.1 Cross Referencing

We have incorporated the `\cref` or `\Cref` command from `cleveref` package in this system. This will automatically insert words like Figure, Table etc. in your text.

See these examples:

- Figure 1.1 is a sample figure.
- Table 1.1 is a table.
- Section 2.1 in Chapter 2 shows some examples of citations.

1.2 How to Write a Section

This is for writing section.

1.3 How to Add Table and Figures

You should refer a figure as, "Figure 1.1 is a sample figure".

Then we applied same test cases to our modified algorithm i.e. the heuristic algorithm with our new operation *Block Reversal*. The performance is shown in Table 1.1.

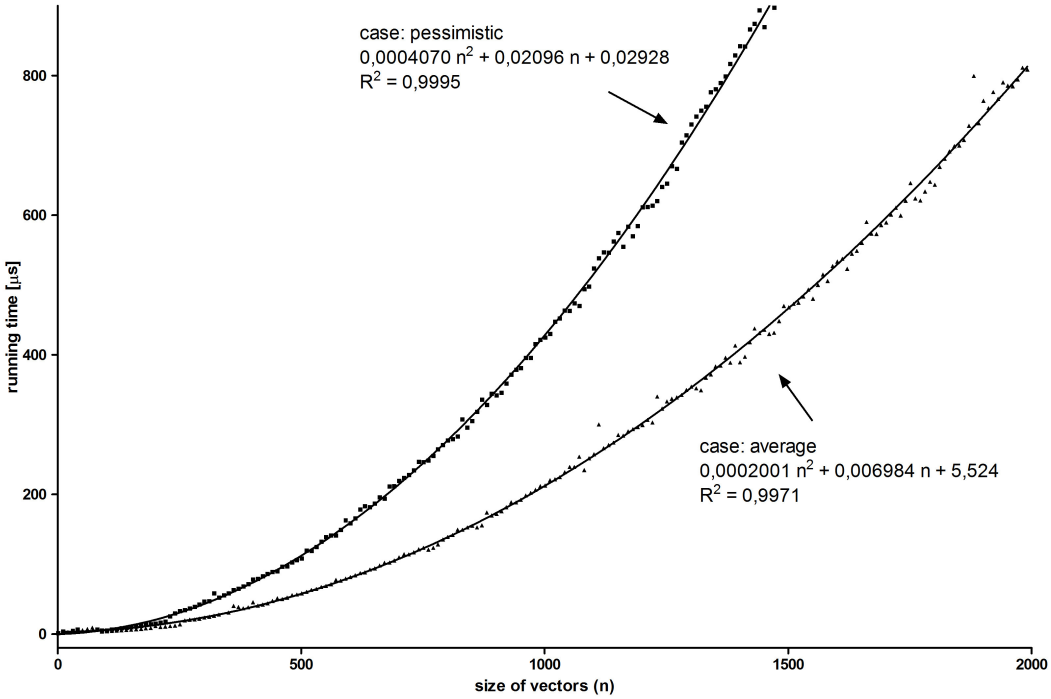

Figure 1.1: This is a sample figure.

Table 1.1: Performance table of *Block reversal* in a heuristic algorithm

α	αn	Test Cases											Average # of calculated operation
		1	2	3	4	5	6	7	8	9	10	11	
0.1	2	2	2	2	2	2	2	2	2	2	2	2	2
0.2	4	4	4	5	2	4	4	4	4	2	4	4	3.73
0.3	6	5	6	6	6	6	7	6	5	6	6	6	5.91
0.4	8	7	8	5	6	7	6	6	7	8	8	7	6.82
0.5	10	9	10	6	12	10	8	10	10	7	7	10	9
0.6	12	9	12	16	10	12	12	9	11	12	9	12	11.27
0.7	14	13	7	18	15	14	8	13	11	13	13	14	12.64
0.8	16	10	17	14	16	13	16	13	11	13	17	13	13.91
0.9	18	14	16	15	12	15	11	15	11	15	12	12	13.45
1	20	18	11	13	11	13	15	17	17	13	18	12	14.36

These are some dummy text used as page fillers only.

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End of dummy text.

Chapter 2

Citation Examples

In this chapter we show how we can cite the references.

2.1 See the Citations

As discussed by authors in [1–3] we can further show how this affects us. Moreover [4–11] can be examples for the previous works. Among these [10, 12–17] are the prominent ones. Also you can take a look at [18–25].

Chapter 3

Another Chapter

3.1 A Section

Some text.

3.1.1 This is a Subsection

And some more.

This is a Subsubsection

Yet some more.

3.2 And Another Section

Here are some dummy texts.

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Chapter 4

Index Creation

Here is an example of index creation:

Albert Einstein was a German-born theoretical physicist who developed the theory of relativity, one of the two pillars of modern physics. His work is also known for its influence on the philosophy of science. He is best known to the general public for his massenergy equivalence formula $E = mc^2$, which has been dubbed the world's most famous equation. He received the 1921 Nobel Prize in Physics for his services to theoretical physics, and especially for his discovery of the law of the photoelectric effect, a pivotal step in the development of quantum theory.

Sir Isaac Newton was an English mathematician, physicist, astronomer, theologian, and author (described in his own day as a natural philosopher) who is widely recognised as one of the most influential scientists of all time, and a key figure in the scientific revolution. His book Philosophi Naturalis Principia Mathematica (Mathematical Principles of Natural Philosophy), first published in 1687, laid the foundations of classical mechanics. Newton also made seminal contributions to optics, and shares credit with Gottfried Wilhelm Leibniz for developing the infinitesimal calculus.

Chapter 5

k-safe Labeling of Petersen Graph

In 1898, Petersen produced a trivalent graph with no leaves, now called the Petersen graph [26]. In this chapter we study k-safe labeling for the Petersen graph. We also give upper bound for the span of the Petersen graph. We provide necessary proof for the upper bound.

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Index

Appendix A

Algorithms

A.1 Sample Algorithm

In Algorithm 1 we show how to calcute $y = x^n$.

Algorithm 1 Calculate $y = x^n$

Require: $n \geq 0 \vee x \neq 0$
Ensure: $y = x^n$
  $y \leftarrow 1$
  if $n < 0$ **then**
    $X \leftarrow 1/x$
    $N \leftarrow -n$
  else
    $X \leftarrow x$
    $N \leftarrow n$
  end if
  while $N \neq 0$ **do**
    if N is even **then**
      $X \leftarrow X \times X$
      $N \leftarrow N/2$
    else $\{N$ is odd$\}$
      $y \leftarrow y \times X$
      $N \leftarrow N - 1$
    end if
  end while

Appendix B

Codes

B.1 Sample Code

We use this code to find out...

```
1 #include <stdio.h>
2 int Fibonacci(int);
3
4 main()
5 {
6   int n, i = 0, c;
7
8   printf("Enter␣the␣value␣of␣n:␣");
9   scanf("%d",&n);
10
11  printf("\nFibonacci␣series\n");
12
13  for (c = 1 ; c <= n ; c++)
14    {
15      printf("%d\n", Fibonacci(i));
16      i++;
17    }
18
19  return 0;
20 }
21
22 int Fibonacci(int n)
23 {
```

```
24   if (n == 0)
25     return 0;
26   else if (n == 1)
27     return 1;
28   else
29     return (Fibonacci(n-1) + Fibonacci(n-2));
30 }
```

B.2 Another Sample Code

```
1  SELECT associations2.object_id, associations2.term_id,
2         associations2.cat_ID, associations2.term_taxonomy_id
3  FROM (SELECT objects_tags.object_id, objects_tags.term_id,
4       wp_cb_tags2cats.cat_ID, categories.term_taxonomy_id
5  FROM (SELECT wp_term_relationships.object_id,
6       wp_term_taxonomy.term_id, wp_term_taxonomy.term_taxonomy_id
7  FROM wp_term_relationships
8  LEFT JOIN wp_term_taxonomy ON
9       wp_term_relationships.term_taxonomy_id =
10      wp_term_taxonomy.term_taxonomy_id
11 ORDER BY object_id ASC, term_id ASC)
12 AS objects_tags
13 LEFT JOIN wp_cb_tags2cats ON objects_tags.term_id =
14      wp_cb_tags2cats.tag_ID
15 LEFT JOIN (SELECT wp_term_relationships.object_id,
16      wp_term_taxonomy.term_id as cat_ID,
17      wp_term_taxonomy.term_taxonomy_id
18 FROM wp_term_relationships
19 LEFT JOIN wp_term_taxonomy ON
20      wp_term_relationships.term_taxonomy_id =
21      wp_term_taxonomy.term_taxonomy_id
22 WHERE wp_term_taxonomy.taxonomy = 'category'
23 GROUP BY object_id, cat_ID, term_taxonomy_id
24 ORDER BY object_id, cat_ID, term_taxonomy_id)
25 AS categories on wp_cb_tags2cats.cat_ID = categories.term_id
26 WHERE objects_tags.term_id = wp_cb_tags2cats.tag_ID
27 GROUP BY object_id, term_id, cat_ID, term_taxonomy_id
28 ORDER BY object_id ASC, term_id ASC, cat_ID ASC)
29 AS associations2
30 LEFT JOIN categories ON associations2.object_id =
```

```
31      categories.object_id
32 WHERE associations2.cat_ID <> categories.cat_ID
33 GROUP BY object_id, term_id, cat_ID, term_taxonomy_id
34 ORDER BY object_id, term_id, cat_ID, term_taxonomy_id
```