## Bachelor Thesis

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October 2020

## Contents

1	Graphics 1.1 Image Caption	3 3
2	Reference to image	3
3	Reference to page containing the image	3
4	Section, subsection, sub-subsection, paragraph, subparagraph 4.1 numbered subsection	3 3
5	Lists 5.1 Bullet list	4 4 4 4
6	Table with multiple columns 6.1 Various horizontal alignments in columns 6.2 Cell spanning multiple columns 6.3 Vertical alignment in multi-line cells 6.4 Table description and label 6.5 Reference to table 6.6 Table description and label	5 5 5 5 5
7	Code listing 7.1 With emphasized key words in your favorite programming language	<b>5</b>
8	Bibliography with book, article and internet link	<b>6</b>

Figure 1: Above caption







Figure 2: Under caption

### 1 Graphics

- 1.1 Image Caption
- 1.2 Images next to each other
- 2 Reference to image

reference to my universe 1 reference to double universe 2

## 3 Reference to page containing the image

reference to my universe page 3 reference to double universe page 3

# 4 Section, subsection, sub-subsection, paragraph, subparagraph

#### 4.1 numbered subsection

this is subsection

#### 4.1.1 numbered sub-subsection

this is sub-subsection

#### non-numbered subsection

this is subsection

#### non-numbered sub-subsection

this is sub-subsection

paragraph this is paragraph

subparagraph this is subparagraph

#### 5 Lists

#### 5.1 Bullet list

- pew
- pew

#### 5.2 Alternative bullet symbols

- ✓ Custom yes
- X Custom no

#### 5.3 Numbered lists

- 1. one
  - 1.1. one one
- 2. two

#### 5.3.1 Alternatively numbered lists

- I. I
  - I.i. I i
- II. II
- III. III
- IV. IV

### 6 Table with multiple columns

#### 6.1 Various horizontal alignments in columns

AM left	AM center	AM right
AM left	AM center	AM right

#### 6.2 Cell spanning multiple columns

Am wiiiiiiiiiide	
smol	smol

#### 6.3 Vertical alignment in multi-line cells

$$\begin{array}{cc} \text{Multirow} & \begin{matrix} X \\ X \end{matrix}$$

#### 6.4 Table description and label

Table 1: Your caption.

#### 6.5 Reference to table

reference to table 6.3

## 7 Code listing

```
# Sorts array a[0..n-1] using Bogo sort
def bogoSort(a):
    n = len(a)
    while (is_sorted(a)== False):
        shuffle(a)

# To check if array is sorted or not
def is_sorted(a):
    n = len(a)
    for i in range(0, n-1):
        if (a[i] > a[i+1] ):
            return False
```

return True

```
# To generate permutation of the array def shuffle(a):

n = len(a)
for i in range (0,n):

r = random.randint(0,n-1)
a[i], a[r] = a[r], a[i]
```

## 7.1 With emphasized key words in your favorite programming language

```
\# Sorts array a \lceil 0...n-1 \rceil using Bogo sort
def bogoSort(a):
    n = len(a)
    while (is\_sorted(a) == False):
        shuffle (a)
# To check if array is sorted or not
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    n = len(a)
    for i in range (0, n-1):
        if (a[i] > a[i+1]):
             return False
    return True
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        r = random.randint(0,n-1)
        a[i], a[r] = a[r], a[i]
```

## 8 Bibliography with book, article and internet link

#### References

- [1] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LATEX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.
- [2] Albert Einstein. Zur Elektrodynamik bewegter Körper. (German) [On the electrodynamics of moving bodies]. Annalen der Physik, 322(10):891–921, 1905.

[3] Knuth: Computers and Typesetting, http://www-cs-faculty.stanford.edu/~uno/abcde.html

<b>Q</b> 1	Todo
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lorem ipsum dolar.