

References

1. <https://www.dfki.de/web/research/publications/renameFileForDownload?...25...>
2. MK Dalal, MA Zaveri - Applied computational intelligence and soft ..., 2014 - dl.acm.org
3. <http://www.aclweb.org/anthology/W10-3209>
4. <http://www.sciencedirect.com/science/article/pii/S1877050913008879>
5. <http://dl.acm.org/citation.cfm?id=2487944>
6. <http://www.ijsr.net/archive/v3i12/U1VCMTQxMDI2.pdf>
7. https://www.ijarcse.com/docs/papers/Volume_5/11_November2015/V5I11-0349.pdf
8. www.Tripadvisor.com
9. <https://www.apachefriends.org/download.html>
10. <https://www.webharvy.com>
11. <https://en.wikipedia.org/>
12. <https://www.mysql.com/about/>
13. <http://www.nltk.org/>
14. <https://www.cs.helsinki.fi/u/myllymak/Teaching/2004/Fall/Seminar/poroshin.pdf>
15. <http://serialsjournals.com/serialjournalmanager/pdf/1345547827.pdf>
16. http://www.webopedia.com/TERM/W/World_Wide_Web.html
17. http://cse.iitkgp.ac.in/~bivasm/uc_notes/07apriori.pdf
18. https://en.wikipedia.org/wiki/Apriori_algorithm
19. <http://www.vskills.in/certification/tutorial/data-mining-and-warehousing/association-rules-mining/>
20. <https://www.slideshare.net/TuyenVuongDinh/mysql-architectures>
21. <https://www.analyticsvidhya.com/blog/2015/09/naive-bayes-explained/>
22. <https://github.com/VTwo-Group/Apriori-Algorithm>

Appendix A

Structure of Hotels Table in Database

hotel_id	hotel_name	create_time	update_time
1	Coral sand	2017-04-07 04:11:12	NULL
2	Citrus	2017-04-07 04:06:07	NULL
3	Adithya	2017-04-22 00:00:00	NULL
4	Avenra Beach Hotel	2017-04-22 00:00:00	NULL
5	Coralrock	2017-04-22 00:00:00	NULL
6	Drifters Hotel	2017-04-22 00:00:00	NULL
7	Hikka Tranz by Cinnamon	2017-04-22 00:00:00	NULL
8	Hikkaduwa Beach Hotel	2017-04-22 00:00:00	NULL
9	Hotel lanka super coral	2017-04-22 00:00:00	NULL
10	Hotel Ocean View Cottage	2017-04-22 00:00:00	NULL
11	kalla bongo lake resort	2017-04-22 00:00:00	NULL
12	Lavanga Resort _ Spa	2017-04-22 00:00:00	NULL
13	Main Reef Hotel	2017-04-22 00:00:00	NULL
14	Sapphire seas	2017-04-22 00:00:00	NULL
15	Sunbeach hotel	2017-04-22 00:00:00	NULL
16	Amaya hills	2017-04-22 00:00:00	NULL
17	Clove Villa	2017-04-22 00:00:00	NULL
18	Earls regency	2017-04-22 00:00:00	NULL

Figure 23: Structure of Hotels Table in Database

Structure of Location Table in Database

location_id	aria_name	create_time	update_time
1	Hikkaduwa	2017-04-07 09:11:12	NULL
2	Kandy	2017-04-21 00:00:00	NULL
3	Nuwara Eliya	2017-04-21 00:00:00	NULL
4	Colombo	2017-04-21 00:00:00	NULL

Figure 24: Structure of Location Table in Database

Structure of Reviews Table in Database

	id	location_id	hotel_id	status	beach_area	easy_access_to_town	room_service	comfortable_bed	clean	room_spacious	other_facilities
	0	1	1	1	NULL	NULL	NULL	NULL	NULL	NULL	NULL
	1	1	1	1	amazing beach resort					spacious	
	2	1	1	1			nice				
	3	1	1	1	great location on the beach that you can swim in				not cleaned properly	rooms are a good size	
	4	1	1	1	located right above the beach	within walking distance of numerous restaurants an...			clean	rooms are a good size	
	5	1	1	1	is in a great location right on the beach						
	6	1	1	1	had a stunning view of the sea		room was serviced daily although it was clean		room was serviced daily although it was clean		roo
	7	1	1	1	Awesome location				Clean.	Good sized rooms	

Figure 25: Structure of Reviews Table in Database

After sentiment Analysis filtered only positive hotel features

```

db_create.sql | round_all.sql | index.php | apom.php | dataset-2.txt | dataset-4.txt | localxml
1 Other facilities
2 Room spacious,Other room facility
3 Food
4 Attractive View,staff,Food
5 Room spacious,Other room facility,staff
6 Other facilities
7 Attractive View,staff,pool
8 Comfortable bed,Room spacious,Other room facility,Other facilities
9 Attractive View,Room spacious,Other room facility
10 Attractive View,Room spacious,Other room facility,Food
11 Attractive View,Architecture
12 Other room facility
13 staff
14 staff,Food
15 Room service,staff
16 Food,Other facilities
17 pool,Food,Worth for money
18 Attractive View,staff
19 Attractive View,Room service,Food
20 Attractive View,staff
21 Easy access to town,staff,Worth for money
22 Easy access to town
23 Attractive View,staff
24 Room spacious,Other room facility
25 Food
26 staff,Food
27 Room spacious,Other room facility,staff,Food
28 Other facilities
29 Other facilities
  
```

Figure 26: Structure of Reviews Table in Database

Appendix B

Cording of Data base creation

```
CREATE TABLE IF NOT EXISTS `hotels` (  
  `hotel_id` INT,  
  `hotel_name` varchar(200),  
  `create_time` datetime DEFAULT NULL,  
  `update_time` datetime DEFAULT NULL,  
  PRIMARY KEY (`hotel_id`)  
) DEFAULT CHARSET=utf8;
```

```
CREATE TABLE IF NOT EXISTS `locations` (  
  `location_id` INT,  
  `aria_name` varchar(200),  
  `create_time` datetime DEFAULT NULL,  
  `update_time` datetime DEFAULT NULL,  
  PRIMARY KEY (`location_id`)  
) DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `reviews` (  
  `id` bigint(20) NOT NULL,  
  `location_id` int(11) DEFAULT NULL,  
  `hotel_id` int(11) DEFAULT NULL,  
  `status` int(11) DEFAULT '1',  
  `beach_area` varchar(200) DEFAULT NULL,  
  `easy_access_to_town` varchar(200) DEFAULT NULL,  
  `room_service` varchar(200) DEFAULT NULL,  
  `comfortable_bed` varchar(200) DEFAULT NULL,  
  `clean` varchar(200) DEFAULT NULL,  
  `room_spacious` varchar(200) DEFAULT NULL,  
  `other_room_facility` varchar(200) DEFAULT NULL,  
  `staff` varchar(200) DEFAULT NULL,  
  `pool` varchar(200) DEFAULT NULL,  
  `wifi` varchar(200) DEFAULT NULL,  
  `architecture` varchar(200) DEFAULT NULL,  
  
  `food` varchar(200) DEFAULT NULL,  
  
  `worth_for_money` varchar(200) DEFAULT NULL,  
  
  `spa` varchar(200) DEFAULT NULL,  
  
  PRIMARY KEY (`id`),  
  
  FOREIGN KEY (location_id) REFERENCES locations(location_id),  
  
  FOREIGN KEY (hotel_id) REFERENCES hotels(hotel_id)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

Test script of efficiency of Sentiment Analysis

```
<?php

include_once "dbcon.php";
include 'class.apriori.php';
/* Get all locations */
$sql = "SELECT DISTINCT aria_id, aria_name, hotel_id, hotel_name FROM reviews";
$result = $conn->query($sql);
$locations = array();
$hotels = array();
while($row = $result->fetch_assoc())
{
    $hotels[$row['hotel_name']] = $row['hotel_id'];
    $locations[$row['aria_id']] = $row;
}
/* Get all features */
$features = array(
    "attractive_view" => "Attractive View",
    "easy_access_to_town" => "Easy access to town",
    "room_service" => "Room service",
    "comfortable_bed" => "Comfortable bed",
    "clean" => "Clean",
    "room_spacious" => "Room spacious",
    "other_room_facility" => "Other room facility",
    "staff" => "staff",
    "pool" => "pool",
    "wifi" => "wifi",
    "architecture" => "Architecture",
    "food" => "Food",
    "worth_for_money" => "Worth for money",
    "spa" => "Spa",
    "other_facilities" => "Other facilities"
);

/* Print the page header */
print "<h1>Hotel Ranking System</h1><br/>";
/* Print the form */
print '<form action="index.php" method="post">';

/* Print Locations */
print '<table for="aria">Location: </table>';
print '<select name="aria">';
/* Foreach location */
foreach($locations as $location)
{
    $selected = "";
    /* Check if submit was click before and the aria_id is set */
    if(isset($_POST['aria']) && $_POST['aria'] == $location['aria_id'])
    {
        $selected = 'selected';
    }
    /* Ignore values where 'aria_name' is not set */
    if(!$location['aria_name'])
    {
        continue;
    }
    print '<option value="'.$location['aria_id'].'" '.$selected.' '.$location['aria_name'].'</option>';
}
print '</select>';
print '<br/><br/>';

/* Print Feature */
print '<table for="feature">Feature: </table>';
print '<select name="feature">';
/* Foreach feature */
foreach($features as $key => $value)
```

```

    {
        $seleted = "";
        /* Check if submit was click before and the aria_id is set */
        if(isset($_POST['feature']) && $_POST['feature'] == $key)
        {
            $seleted = 'selected';
        }
        print '<option value="'.$key.'" '.$seleted.'> '.$value.'</option>';
    }
print '</select>';

/* Print submit button */
print '<br/><br/><input type="submit" value="Search">';

print '</form>';

/* check if the submit button was click */
if(isset($_POST['aria']) && isset($_POST['feature']))
{
    $aria_id = $_POST['aria'];
    $feature_col = $_POST['feature'];
    /* Get all reviews for the given hotel */
    $sql = "SELECT DISTINCT hotel_id AS hid, hotel_name AS hname, ".$feature_col." AS feature
FROM reviews WHERE aria_id=".$aria_id;
    $result = $conn->query($sql);
    $results = array();
    /* Foreach Review */
    while($row = $result->fetch_assoc())
    {
        /* Curl request to http://text-processing.com API */
        $ch = curl_init();
        curl_setopt($ch, CURLOPT_URL, "http://text-processing.com/api/sentiment/");
        curl_setopt($ch, CURLOPT_POST, TRUE);
        curl_setopt($ch, CURLOPT_POSTFIELDS, 'text='.$row["feature"]);
        curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
        /* Process Curl response */
        $response = curl_exec($ch);
        $res = json_decode($response, true);
        /* save the result */
        $results[$row["hname"]][] = $res['label'];
        curl_close($ch);
    }

    /* Get the positive rating for each hotel */
    $finalResult = array();
    foreach($results as $hotel => $reviews)
    {
        /* Total number of reviews */
        $totalReviews = count($reviews);
        $posReviews = 0;
        /* Get the number of positive reviews */
        foreach($reviews as $review)
        {
            if($review=='pos')
            {
                $posReviews++;
            }
        }
        /* Calculate the positive rating */
        $finalResult[$hotel] = $posReviews*100/$totalReviews;
    }
    /* Sort using the rating */
    arsort($finalResult);
    /* Print the values */
    print '<table>';
    print '<table border=1px><th>Hotel</th><th>Ranking</th><th>Association</th>';
}

```



```

foreach($finalResult as $hotel => $data)
{
    $file = 'dataset/dataset-' . $hotels[$hotel] . '.txt';
    $Apriori = new Apriori();

    $Apriori->setMaxScan(20);    //Scan 2, 3, ...
    $Apriori->setMinSup(2);      //Minimum support 1, 2, 3, ...
    $Apriori->setMinConf(60);    //Minimum confidence - Percent 1, 2, ..., 100
    $Apriori->setDelimiter(','); //Delimiter
    $Apriori->process($file);
    $ruleString = "";
    $rule = $Apriori->getAssociationRules();
    $ruleDatas = array();
    if(isset($rule[$features[$feature_col]]))
    {
        $ruleDatas = $rule[$features[$feature_col]];
    }
    foreach($ruleDatas as $key => $value)
    {
        $ruleString .= $key . '<br/>';
    }
    print '<tr>';
        print '<td>' . $hotel . '</td>';
        print '<td>' . $data . '%</td>';
        print '<td>' . $ruleString . '</td>';
    print '</tr>';
}
print '</table>';
}

```

Apriori Test script

```
<!DOCTYPE HTML>
<html>
<head>
  <meta http-equiv="content-type" content="text/html; charset=utf-8" />
  <title>Apriori Alghoritm</title>
</head>
<body style="font-family: monospace;">
<?php
include 'class.apriori.php';
include_once "dbcon.php";
$rows = array();
$sql = "SELECT * FROM reviews";
$result = $conn->query($sql);
while($row = $result->fetch_assoc())
{
    $rows[$row['hotel_id']] = $row;
}
print '<form action="apriori.php" method="post">';
print '<lable for="hotel_id">Hotel ID: </lable>';
print '<select name="hotel_id">';
foreach($rows as $row)
{
    $seleted = "";
    if(isset($_POST['hotel_id']) && $_POST['hotel_id'] == $row['hotel_id'])
    {
        $seleted = 'selected';
    }
    print '<option value="'.$row['hotel_id'].'" '.$seleted.'>';
    print '<option value="'.$row['hotel_id'].'" '.$seleted.'>';
}
print '</select>';
print '<br/><br/>';
print '<input type="submit" name="submit" value="Search">';
print '</form>';
if(isset($_POST['submit']))
{
    $file = 'dataset/dataset-'.$_POST['hotel_id'].'.txt';
    $Apriori = new Apriori();

    $Apriori->setMaxScan(20); //Scan 2, 3, ...
    $Apriori->setMinSup(2); //Minimum support 1, 2, 3, ...
    $Apriori->setMinConf(1); //Minimum confidence - Percent 1, 2, ..., 100
    $Apriori->setDelimiter(','); //Delimiter

    /*
    Use Array:
    $dataset = array();
    $dataset[] = array('A', 'B', 'C', 'D');
    $dataset[] = array('A', 'D', 'C');
    $dataset[] = array('B', 'C');
```

```

$dataset[] = array('A', 'E', 'C');
$Apriori->process($dataset);
*/
$Apriori->process($file);

//Frequent Itemsets
echo '<h1>Frequent Itemsets</h1>';
$Apriori->printFreqItemsets();

echo '<h3>Frequent Itemsets Array</h3>';
print_r($Apriori->getFreqItemsets());

//Association Rules
echo '<h1>Association Rules</h1>';
$Apriori->printAssociationRules();

echo '<h3>Association Rules Array</h3>';
print_r($Apriori->getAssociationRules());

//Save to file
//$Apriori->saveFreqItemsets('freqItemsets.txt');
//$Apriori->saveAssociationRules('associationRules.txt');
}
?>
</body>
</html>

```

Hotel Ranking System/ MyCode PHP

```
<?php

include_once "dbcon.php";
include 'class.apriori.php';
/* Get all locations */
$sql = "SELECT DISTINCT aria_id, aria_name, hotel_id, hotel_name FROM reviews";
$result = $conn->query($sql);
$locations = array();
$hotels = array();
while($row = $result->fetch_assoc())
{
    $hotels[$row['hotel_name']] = $row['hotel_id'];
    $locations[$row['aria_id']] = $row;
}
/* Get all features */
$features = array(
    "attractive_view" => "Attractive View",
    "easy_access_to_town" => "Easy access to town",
    "room_service" => "Room service",
    "comfortable_bed" => "Comfortable bed",
    "clean" => "Clean",
    "room_spacious" => "Room spacious",
    "other_room_facility" => "Other room facility",
    "staff" => "staff",
    "pool" => "pool",
    "wifi" => "wifi",
    "architecture" => "Architecture",
    "food" => "Food",
    "worth_for_money" => "Worth for money",
    "spa" => "Spa",
    "other_facilities" => "Other facilities"
);

/* Print the page header */
print "<h1>Hotel Ranking System</h1><br/>";
/* Print the form */
print '<form action="index.php" method="post">';

/* Print Locations */
print '<table for="aria">Location: </table>';
print '<select name="aria">';
/* Foreach location */
foreach($locations as $location)
{
    $selected = "";
    /* Check if submit was click before and the aria_id is set */
    if(isset($_POST['aria']) && $_POST['aria'] == $location['aria_id'])
    {
        $selected = 'selected';
    }
}
```

```

    }
    /* Ignore values where 'aria_name' is not set */
    if(!$location['aria_name'])
    {
        continue;
    }
    print '<option value="'. $location['aria_id']. "' '." $seleted.'>
'. $location['aria_name']. '</option>';
}
print '</select>';
print '<br/><br/>';

/* Print Feature */
print '<lable for="feature">Feature: </lable>';
print '<select name="feature">';
/* Foreach feature */
foreach($features as $key => $value)
{
    $seleted = "";
    /* Check if submit was click before and the aria_id is set */
    if(isset($_POST['feature']) && $_POST['feature'] == $key)
    {
        $seleted = 'selected';
    }
    print '<option value="'. $key. "' '." $seleted.'> '." $value.'</option>';
}
print '</select>';

/* Print submit button */
print '<br/><br/><input type="submit" value="Search">';

print '</form>';

/* check if the submit button was click */
if(isset($_POST['aria']) && isset($_POST['feature']))
{
    $aria_id = $_POST['aria'];
    $feature_col = $_POST['feature'];
    /* Get all reviews for the given hotel */
    $sql = "SELECT DISTINCT hotel_id AS hid, hotel_name AS hname, ".$feature_col." AS
feature FROM reviews WHERE aria_id=".$aria_id;
    $result = $conn->query($sql);
    $results = array();
    /* Foreach Review */
    while($row = $result->fetch_assoc())
    {
        /* Curl request to http://text-processing.com API */
        $ch = curl_init();
        curl_setopt($ch, CURLOPT_URL, "http://text-
processing.com/api/sentiment/");

```

```

    curl_setopt($ch, CURLOPT_POST, TRUE);
    curl_setopt($ch, CURLOPT_POSTFIELDS, 'text='.$row["feature"]);
    curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
    /* Process Curl response */
    $response = curl_exec ($ch);
    $res = json_decode($response, true);
    /* save the result */
    $results[$row["hname"]][] = $res['label'];
    curl_close ($ch);
}

/* Get the positive rating for each hotel */
$finalResult = array();
foreach($results as $hotel => $reviews)
{
    /* Total number of reviews */
    $totalReviews = count($reviews);
    $posReviews = 0;
    /* Get the number of positive reviews */
    foreach($reviews as $review)
    {
        if($review=='pos')
        {
            $posReviews++;
        }
    }
    /* Calculate the positive rating */
    $finalResult[$hotel] = $posReviews*100/$totalReviews;
}
/* Sort using the rating */
arsort($finalResult);
/* Print the values */
print '<table>';
print '<table border=1px><th>Hotel</th><th>Ranking</th><th>Association</th>';
foreach($finalResult as $hotel => $data)
{
    $file = 'dataset/dataset-' . $hotels[$hotel] . '.txt';
    $Apriori = new Apriori();

    $Apriori->setMaxScan(20); //Scan 2, 3, ...
    $Apriori->setMinSup(2); //Minimum support 1, 2, 3, ...
    $Apriori->setMinConf(60); //Minimum confidence - Percent 1, 2, ..., 100
    $Apriori->setDelimiter(','); //Delimiter
    $Apriori->process($file);
    $ruleString = "";
    $rule = $Apriori->getAssociationRules();
    $ruleDatas = array();
    if(isset($rule[$features[$feature_col]]))
    {
        $ruleDatas = $rule[$features[$feature_col]];
    }
}

```

```
        foreach($ruleDatas as $key => $value)
        {
            $ruleString .= $key.'  
>';
        }
        print '<tr>';
            print '<td>'. $hotel. '</td>';
            print '<td>'. $data. '%</td>';
            print '<td>'. $ruleString. '</td>';
        print '</tr>';
    }
    print '</table>';
}
```

Appendix C

User 2:

Survey
Hotel Ranking System

Name: Archana **Profession:** *House wife*

1. How likely is it that you would recommend this Hotel Ranking System to someone?

Very Satisfied ~~Satisfied~~ Neutral
 Dissatisfied Very Dissatisfied

2. How satisfied are you with the reliability of this software?

Very Satisfied ~~Satisfied~~ Neutral
 Dissatisfied Very Dissatisfied

3. How satisfied are you with this software's ease of use?

Very Satisfied ~~Satisfied~~ Neutral
 Dissatisfied Very Dissatisfied

4. How satisfied are you with the look and feel of this software?

Very Satisfied ~~Satisfied~~ Neutral
 Dissatisfied Very Dissatisfied

5. Do you have any thought on how to improve this software?

Speed should improve and should have some more information for a traveler

6. How would you rate the efficiency of our Hotel Ranking System?

Very Satisfied ~~Satisfied~~ Neutral
 Dissatisfied Very Dissatisfied

7. How would you rate the overall performance of the software?

100%-80% 79%-60% 59%-40%
 39%-20% 19%-0%

Figure 28: Survey of user 2

User 3:

Survey
Hotel Ranking System

Name: Gunathilaka **Profession:** Associate QA Engineer

1. How likely is it that you would recommend this Hotel Ranking System to someone?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

2. How satisfied are you with the reliability of this software?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

3. How satisfied are you with this software's ease of use?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

4. How satisfied are you with the look and feel of this software?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

5. Do you have any thought on how to improve this software?

Speed should improve

6. How would you rate the efficiency of our Hotel Ranking System?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

7. How would you rate the overall performance of the software?

100%-80% 79%-60% 59%-40%
 39%-20% 19%-0%

Figure 29: Survey of user 3

User 6:

Survey
Hotel Ranking System

Name: Udara Profession: *Associate Software Engineer*

1. How likely is it that you would recommend this Hotel Ranking System to someone?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

2. How satisfied are you with the reliability of this software?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

3. How satisfied are you with this software's ease of use?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

4. How satisfied are you with the look and feel of this software?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

5. Do you have any thought on how to improve this software?

Can add some more features which travelers looking for

6. How would you rate the efficiency of our Hotel Ranking System?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

7. How would you rate the overall performance of the software?
 100%-80% 79%-60% 59%-40%
 39%-20% 19%-0%

Figure 32: Survey of user 6

User 7:

Survey
Hotel Ranking System

Name: *Ranjani* Profession: *Hotel Manager*

1. How likely is it that you would recommend this Hotel Ranking System to someone?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

2. How satisfied are you with the reliability of this software?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

3. How satisfied are you with this software's ease of use?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

4. How satisfied are you with the look and feel of this software?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

5. Do you have any thought on how to improve this software?

Identify some hotel feature that customer looking for because current system is limited for 15 features only

6. How would you rate the efficiency of our Hotel Ranking System?

Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

7. How would you rate the overall performance of the software?

100%-80% 79%-60% 59%-40%
 39%-20% 19%-0%

Figure 33: Survey of user 7

User 8:

Survey
Hotel Ranking System

Name: Ushani Profession: Tutor

1. How likely is it that you would recommend this Hotel Ranking System to someone?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

2. How satisfied are you with the reliability of this software?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

3. How satisfied are you with this software's ease of use?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

4. How satisfied are you with the look and feel of this software?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

5. Do you have any thought on how to improve this software?

6. How would you rate the efficiency of our Hotel Ranking System?
 Very Satisfied Satisfied Neutral
 Dissatisfied Very Dissatisfied

7. How would you rate the overall performance of the software?
 100%-80% 79%-60% 59%-40%
 39%-20% 19%-0%

Figure 34: Survey of user 8