

# DEVELOPMENT OF SMART APPLICATION FOR RANCAUPAS CAMPING GROUND USING THE API ACCUWEATHER AND GYROSCOPE SENSOR ON ANDROID SMARTPHONE

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## ABSTRACT

Campgrounds Rancaupas is natural tourist area managed by the forestry sector Jawa Barat. Problems often occur during a visit to Rancaupas often encountered bad weather so that activities carried out should be stopped, such as during a photo prewedding activity must be stopped because of bad weather or a visitor conducting photo prewedding not get a nice location for the shooting because of not knowing the location Campgrounds in Rancaupas. Problems that occur in addition to the bad weather was the visitors who want to book a campsite in determining the location of the land should come directly to localized if wanted as desired.

## 1. INTRODUCTION

Campgrounds Rancaupas have all kinds of rides that can be enjoyed, such as deterrence deer, Waterboom, Shutter Arrow, Outbound Bridge Edelweiss, café, etc. This certainly adds to the attraction of tourists to visit these attractions. Campgrounds Rancaupas also often the arrival of visitors who want to do pre-wedding photos almost every day if the month wedding season arrives.

Frame Studio is one of the team of photographers who do pre-wedding photos in Campgrounds Rancaupas, they presented some obstacles while shooting them, the weather conditions are bad, do not get free land for conducting the picture. Questionnaires also states that those who do pre-wedding photos often experience problems when taking pictures, the most commonly perceived barriers include: the weather was bad with the acquisition of 79.1%, did not get the location of empty photo of 31.9% and due to weather heat of 24.2%.

Results of interviews with visitors Tezal Nugraha Pitra Campgrounds Rancaupas, stated in the book should visit the campsite land directly to the location. Tezal said it would be better if the media to assist in booking Campgrounds Rancaupas land. The results of the online questionnaire (google form) can be found in Appendix D-1 there were 111 respondents, 97.3% of respondents using android smartphone and 45.9% prefer to conduct surveys directly to the

location. The results of the questionnaire also stated that 97.3% of the 111 respondents agreed that if there is an application to assist in site surveys and assist in ordering Campgrounds Rancaupas land.

Based on the description of existing problems in Campgrounds Rancaupas, it takes a smart application to handle all the problems that exist. Smart application in question is an application that can make bookings with features campsite land can see the locations that will be booked and can recommend a visit and provide recommendations for appropriate land to engage in activities Campgrounds Rancaupas based on existing conditions in Campgrounds Rancaupas.

System definition in the dictionary *Webster's Unbrided* are the elements that are interconnected and form one entity or organization [1], The research method is a process to learn, understand, analyze, and solve problems based on phenomena that exist and also linked systematically. The approach used in this study is a quantitative approach, which is one type of research that the specifications is a systematic, planned and structured clearly from the beginning to the creation of the research design [2]

In this study, using an omnidirectional camera is the camera 360 is a camera that includes the horizontal plane around the corner of the field and resembles a ball [3], Also in this application development using mobile applications and android. Mobile used to be able to access and use a web application wirelessly using a mobile device, where the data obtained are in the form of text so it does not need to require too much bandwidth [4],

Android is the operating system for the device *mobile* covers Linux-based operating system, middleware and applications. Android provides an open platform for developers to create their applications. Initially, Google Inc. bought Android Inc. who is a newcomer that makes software for mobile phone / smartphone. Then to develop Android, formed the Open Handset Alliance, a consortium of 34 companies for hardware, software, and telecommunications, termasuk Google, HTC, Intel, Motorola, Qualcomm, T-Mobile, and Nvidia [5],

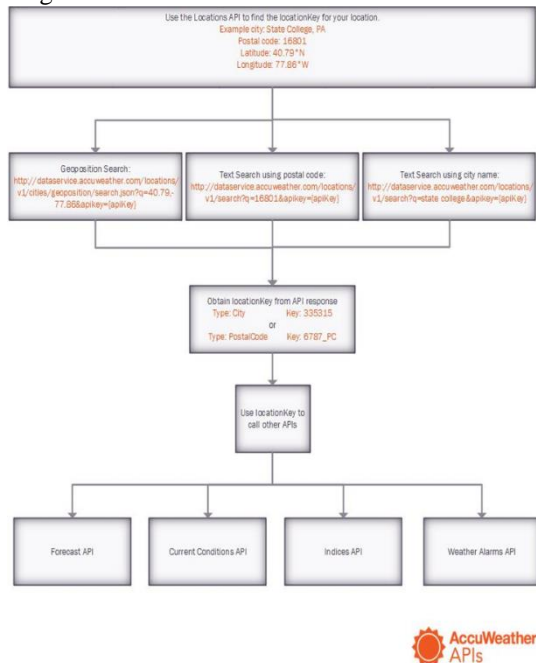
## 1.1 AccuWeather

AccuWeather API is an API that provides weather data according to the location we wanted. Data provided by AccuWeather is as follows:

**Table 1 Table data provided by the API AccuWeather [6],**

Element	Imperial	metric
Cloud Ceiling	##### 0	##### 0
hourly Preception	## 0:00	### 0
preasure	## 0:00	# 000.0
temperature	## 0	## 0.0
visibility	# 0.0 ##	# 0.0
Wind Gust	## 0.0	## 0.0
Wind Speed	## 0.0	## 0.0

From the above data we can use it as a prediction of the weather to come to build an application. For more details we can see the flow diagram of AccuWeather.



**Picture 1 Flow Diagram AccuWeather [2]**

## 1.2 Advantage API AccuWeather

According to the most comprehensive study on the accuracy of forecasts has ever done, AccuWeather is once again confirmed as the source of the most accurate weather forecasts in the world in the category of wind, precipitation and temperature forecasts higher.

In the study, AccuWeather is the best in the accuracy of estimates of wind speed, proved 33 percent more accurate than other providers of weather forecasts and 41 percent more accurate than the average of all other sources were examined. AccuWeather for forecasting the probability of precipitation is 21 percent more accurate than the next ranked provider and 23 percent more accurate than the average of all other sources in

an independent study by industry tracker ForecastWatch.

Level Superior Accuracy™ shown in this three-year study underscores the consistency and reliability of the top five sources AccuWeather weather forecasts and weather warnings next. Joel N. Myers, founder and president and chairman of AccuWeather, said that although the margin of excellence in weather forecasting AccuWeather very significant and meaningful, real value and benefit from the company's forecast is even greater than that shown by these statistics.

Myers stated, "AccuWeather Forecast far more localized to address individual when compared to the more general estimates given other sources. And, AccuWeather also provides more detailed estimates of both location and time, such as the patented MinuteCast® forecast and hour by hour forecasts hours. forecasts AccuWeather also extends much further into the future than any other source, with a 90-day forecasts are available for all locations on the planet. " [8],

## 1.3 Gyroscope sensor

Gyroscope sensor is an electronic sensor that serves to determine the orientation of the motion by means resting on a wheel or disc rotating at high speed on a certain axis. Gyro sensor has the ability to detect motion by gravity, or can detect motion pennguna.

## 1.4 Simple Additive weighting method (SAW)

SAW method is the type of decision support systems. Decision support system is an interactive tool to determine a decision tersetruktur or unstructured, which can not be known how to determine its decision [9],

Step completion SAW method according to **Invalid source specified.** is as follows:

1. Specifying alternate  $A_i$ .
2. Specify the criteria that will be used as reference in decision-making, ie  $C_j$ .
3. Determining the weight of preference or importance level ( $W$ ) of each criterion.  

$$W = [W_1, W_2, W_3, \dots, W_h] \quad (2.1)$$
4. Creating a table ranking the suitability of each alternative on each criterion.
5. Make a decision matrix ( $X$ ) which is formed of twigs table suitability of each alternative on each criterion.  $X$  value of each alternative ( $A_i$ ) on each criterion ( $C_j$ ) is already determined, wherein,  $i = 1, 2, \dots, m$  and  $j = 1, 2, \dots, n$ .

$$X = \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1j} \\ \vdots & \vdots & \ddots & \vdots \\ x_{i1} & x_{i2} & \dots & x_{ij} \end{bmatrix}$$

6. Normalizing the decision matrix by calculating the value of normalized performance rating ( $r_{ij}$ ) of the alternative  $A_i$  on criteria  $C_j$ .

$$r_{ij} = \left\{ \begin{array}{l} \frac{x_{ij}}{\min_i x_{ij}} \dots \dots (2.2) \\ \frac{x_{ij}}{\min_i x_{ij}} \dots \dots (2.3) \end{array} \right\}$$

Information :

- Criteria gains to be made if the value of giving out benefits for decision makers. Conversely, if the cost criterion do incurrence of costs for decision makers.
  - If such criteria profits then divided by the mean value of each column. As for the criteria of cost, the value of each column divided by the value.
7. Results of the value of normalized performance rating ( $r_{ij}$ ) form a matrix normalized ( $R$ ).

$$R = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1j} \\ \vdots & \vdots & \ddots & \vdots \\ r_{i1} & r_{i2} & \dots & r_{ij} \end{bmatrix}$$

8. The end result of preferences ( $V_i$ ) obtained from addition and multiplication element row normalized matrix ( $R$ ) with a preference weighting ( $W$ ) corresponding column of the matrix element ( $W$ )

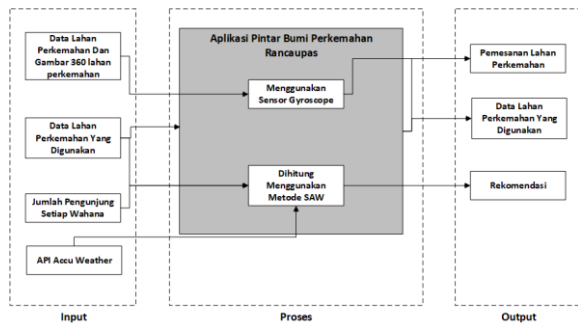
$$V_i = \sum_{j=1}^n w_j r_{ij} \quad (2.4)$$

The calculation result  $V_i$  greater value indicates that the alternative  $A_i$  is the best alternative. [10]

## 2. RESEARCH CONTENT

### 2.1 General Description Analysis System

General description system is built to describe the system will be built, a general description of the system can be seen in Figure 1



**Picture 1.**General Description of Image Systems

Here is a description of each component of the system block in Figure 1.

#### input 1.Blok

Input block has four components, namely the data field 360 campsites with images, weather data, the data campsites were used, and the number of visitors each vehicle to be processed.

#### 2.Blok process

In the smart application process block Campgrounds Rancaupas terdapa 3 process is the process of using a gyroscope sensor, the process of

calculation methods TOPSIS and SAW method of calculation process.

#### 3.Blok Output

This block contains five components, namely the land reservation camp, camp land the data used, monitoring the number of visitors each vehicle, the time monitoring the campground land, and land on a pre-wedding.

### 2.2 Recommendation Analysis Hour

**Table 1.** Table Weather Information Region Campgrounds Rancaupas For One Week

Date and time	Temperature	Status	
		daylight	Night
22 APR 2019	12o - 20o C	Sunny	Partly Cloudy
23 APR 2019	13 ° - 17O C	Sunny	Partly Cloudy
24 APR 2019	12o - 15o C	Partly Sunny	Partly Cloudy
25 APR 2019	13 ° - 15 ° C	Partly Sunny	Partly Cloudy
26 APR 2019	13 ° - 16O C	intermittent Clouds	Clear

The data in Table 3.5 are used to determine the best day to visit by using SAW method, there are steps that must be done is:

- Determine alternatives and criteria

There are five alternatives are:

$A_1 = 22 \text{ APR } 2019$   $A_4 = 25 \text{ APR } 2019$

$A_2 = 23 \text{ APR } 2019$   $A_5 = 26 \text{ APR } 2019$

$A_3 = 24 \text{ APR } 2019$

- The criteria used are:

$C_1 = \text{Temperature (Celsius)}$

$C_2 = \text{Status daytime weather}$

$C_3 = \text{Status evening weather}$

Criteria  $C_1$  is an advantage, so the criterion  $C_2$ , and  $C_3$  is the criterion of cost (cost).

- Determining the weight of preference, namely tingkat interests of each indicator that provides value to each indicator are:

$C_1 = 27\%$

$C_2 = 35\%$

$C_3 = 38\%$

Where weighting preference or level of interest taken from the questionnaire previously distributed to visitors Campgrounds.

- Leave a rating value of each alternative to match all the criteria. To fill the rating matches the value created ordinal scale values as follows:

Ordinal scale for criteria Temperature / Today

is:

**Table 2.** Table Ordinal Scale Temperature / Day

Value	Temperature / Day
1	<13 ° C; > 26o C

2	13 ° C - 14o C; 23o C - 26o C
3	15o C - 22o C

For the results of a match rating scores obtained are presented in Table 3.

Table 3. Table Rating Matches

No.	date	C1	C2	C3
1	A1	1	1	2
2	A2	2	1	2
3	A3	1	2	2
4	A4	2	2	2
5	A5	2	4	1

5. Make a decision matrix of score weighting each alternative on each indicator.

$$R = \begin{bmatrix} 1 & 1 & 2 \\ 2 & 1 & 2 \\ 1 & 2 & 2 \\ 2 & 2 & 2 \\ 2 & 4 & 1 \end{bmatrix}$$

6. The result of the normalization matrix

After getting a match value for each alternative and criteria, the next step is to find the matrix normalisasi. Formula to seek normalization matrix contained in the equation (2.2) and (2.3).

The result of the normalization matrix is as follows:

$$R = \begin{bmatrix} 0.5 & 1 & 0.5 \\ 1 & 1 & 0.5 \\ 0.5 & 0.5 & 0.5 \\ 1 & 0.5 & 0.5 \\ 1 & 0.25 & 1 \\ 0.5 & 0.25 & 0.33 \\ 1 & 0.1 & 0.33 \end{bmatrix}$$

7. Ranking process at all alternative

Ranking process in this phase using the formula in equation (2.4), the result of the calculation is as follows:

$$V1 = (0.5 \times 0.27) + (1 \times 0.35) + (0.5 \times 0.38) = 0.675$$

$$V2 = (1 \times 0.27) + (1 \times 0.35) + (0.5 \times 0.38) = 0.875$$

$$V3 = (0.5 \times 0.27) + (0.5 \times 0.35) + (0.5 \times 0.38) = 0.5$$

$$V4 = (1 \times 0.27) + (0.5 \times 0.35) + (0.5 \times 0.38) = 0.7$$

$$V5 = (1 \times 0.27) + (0.25 \times 0.35) + (1 \times 0.38) = 0.825$$

From the calculation it can be seen that V2 has the highest value compared to others. This means that alternative V2 or 23 APR 2019 is an alternative that has the highest score.

### 2.3 Analysis Recommendation Campgrounds

In making decisions as land recommendation to make decisions using Simple Additive Weighting (SAW). The criteria used are the land area of the campsite each block and the number of visitors. Alternatives used in the determination of land camp as the shooting location of pre-wedding is the location of the block land site. Examples of the use of SAW method in determining the recommendations can be calculated from the following data:

Table 4. Land Use Data Table campsite

N o.	Blo ck	Visitor maxim / Block	Numb er of visito rs	Natural beauty	
				Atmosph ere Forests	Sunri se

1	15	350 People	100 People	3	4.5
2	7A	100 People	30 People	4	3.5
3	11	90 People	50 People	3.2	4.4
4	1A	100 People	20 People	4.6	3.4
5	3	400 People	230 People	4.7	3.2
6	2A	40 People	5 People	4	3.1
7	2B	200 People	70 People	3.8	3.1

1. Determine alternatives and criteria

There are 7 alternatives are:

$$A_1 = 15 \quad A_4 = 1A \quad A_7 = 2B$$

$$A_2 = 7A \quad A_5 = 3$$

$$A_3 = 11 \quad A_6 = 2A$$

2. The criteria used are:

C1 = Time Visitor (Visitor Max -

Total pengunjung)

C2 = Atmosphere Forests

C3 = Sunrise

The entire existing criteria C1, C1, and C1 is the criterion of profit.

3. Determining the weight of preference, namely tingkat interests of each indicator that provides value to each indicator are:

$$C1 = 0.073$$

$$C2 = 0.244$$

$$C3 = 0.630$$

Where weighting preference or level of interest taken from the questionnaire previously distributed to visitors Campgrounds Rancaupas.

4. Leave a rating value of each alternative to match all the criteria, the following is a table suitability for criteria and alternatives can be seen in Table 3.7.

Table 5. Table Match Criteria and Alternatives

Block name	C1	C2	C3
15	250	3	4.5
7A	70	4	3.5
11	40	3.2	4.4
1A	80	4.6	3.4
3	170	4.7	3.2
2A	35	4	3.1
2B	130	3.8	3.1

5. Make a decision matrix of score weighting each alternative on each indicator.

$$R = \begin{bmatrix} 250 & 3 & 4.5 \\ 70 & 4 & 3.5 \\ 40 & 3.2 & 4.4 \\ 80 & 4.6 & 3.4 \\ 170 & 4.7 & 3.2 \\ 35 & 4 & 3.1 \\ 130 & 3.8 & 3.1 \end{bmatrix}$$

6. The result of the normalization matrix

After getting a match value for each alternative and criteria, the next step is to find the matrix normalisasi. Formula to seek normalization matrix contained in the equation (2.2) and (2.3). The result of the normalization matrix is as follows:

$$R = \begin{bmatrix} 1 & 0.64 & 1 \\ 0.28 & 0.85 & 0.77 \\ 0.16 & 0.68 & 0.97 \\ 0.32 & 0.98 & 0.75 \\ 0.68 & 1 & 0.71 \\ 0.14 & 0.85 & 0.68 \\ 0.52 & 0.81 & 0.68 \end{bmatrix}$$

7. Ranking process at all alternative

Ranking process in this phase using the formula in equation (2.4). the result of the calculation is as follows:

$$V1 = (1 \times 0.073) + (0.64 \times 0.244) + (1 \times 0.630) = 0859$$

$$V2 = (0.28 \times 0.073) + (0.85 \times 0.244) + (0.77 \times 0.630) = 0712$$

$$V3 = (0.16 \times 0.073) + (0.68 \times 0.244) + (0.97 \times 0.630) = 0788$$

$$V4 = (0.32 \times 0.073) + (0.98 \times 0.244) + (0.75 \times 0.630) = 0734$$

$$V5 = (0.68 \times 0.073) + (1 \times 0.244) + (0.71 \times 0.630) = 0.740$$

$$V6 = (0.14 \times 0.073) + (0.85 \times 0.244) + (0.68 \times 0.630) = 0646$$

$$V7 = (0.52 \times 0.073) + (0.81 \times 0.244) + (0.68 \times 0.630) = 0664$$

From the calculation it can be seen that V1 has the highest value compared to others. This means that the alternative V1 or land 15 is an alternative that has the highest score.

## 2.4 Gyroscope Sensor Analysis as a Tool Supporting To Display Pictures Panorama 360 Degrees

The use of sensors *gyroscope* the smart application Campgrounds Rancaupas digunakan land camp during the booking process. Booking campsite area using a panoramic image as a media aide in viewing / Caravan site survey land. A gyro sensor is used as a feature when viewing panoramic images that allow visitors to view the entire land area of the camp in accordance with the movement of the smartphone itself. The process of displaying a panoramic image is as follows:

- Filming dilakukan of approximately 50 images in a single location with pergerakan 30 degrees.
- Perform image stitching using supporting software PTGui.
- Image stitching Rancaupas stored in the server for later loaded by the smartphone.

- Images that have been uploaded in the load on the server using the library that has menyediakan vRPanoview load function of gyroscope sensor.



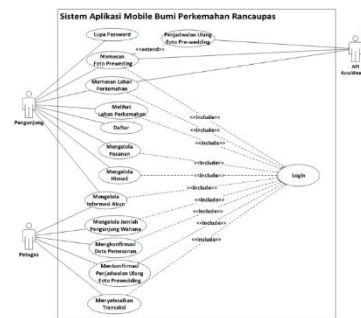
Figure 2. Image Display Panorama 360 Degrees

## 2.5 Functional analysis

### a. Use Case Development

Use Case Diagram is a construction to describe the relationships that occur between actors of the functional contained in the system was designed. From the analysis of the use case diagram in this application can be seen in Figure 3.

Figure 3. Image Use Case Diagram



### b. Class diagram

The class diagram in Rancaupas built applications can be seen in Figure 6

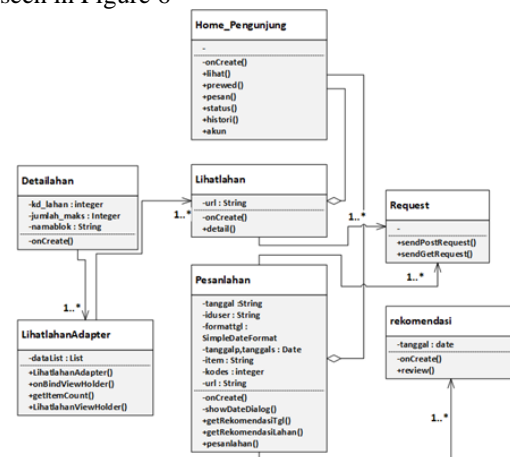
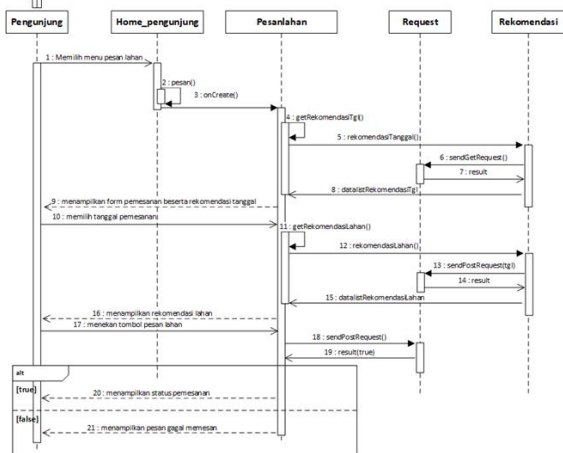


Figure 6. Applications Class Diagram Figure Rancaupas

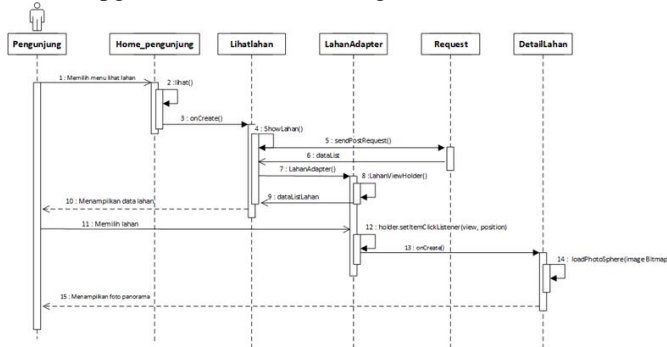
### c. sequence Diagram

Sequence diagrams in the book field camp can be seen in Figure 7.



**Figure 7.** Image Sequence Diagram Ordering Campgrounds

Sequence diagrams within sight of land the campground can be seen in Figure 8.



**Figure 8.** Image Sequence Diagram View Campgrounds

## 2.6 Testing

### a. Blackbox testing

Testing is done to see if the application has been built in line with expectations or not. Testing in Rancaupus application can be seen in the following tables:

**Table 5.** Testing Results Table Booking Campgrounds

True Data Test Results				
scenario Testing	Data Input	Expected results	Observation result	Conclusion
Entering Data Booking Correctly	Message date: 2019-07-29 Date Completed: 2019-08-01 Land: 12 Total: 2	Successfully ordering and order status appear	Successfully ordering and order status appear	[✓] Be accepted [ ] Rejected
Showing Recommendations Hour and Recommendations Campgrounds	Message date: 2019-07-29 The system date: 2019-07-25	The system displays the time on a visit and show you land on the campsite	The system displays the time on a visit and show you land on the campsite	[✓] Be accepted [ ] Rejected
Test Result Wrong Data				
scenario Testing	Data Input	Expected results	Observation result	Conclusion

Entering Order Date Blank	Date Book: {Blank}	Shown message "Date Book should be equipped" and land on nothing	Shown message "Date Book should be equipped" and land on nothing	[✓] Be accepted [ ] Rejected
Entering Date Completed Blank	Date of Completion: {Blank}	Shown message "End Date must be equipped"	Shown message "End Date must be equipped"	[✓] Be accepted [ ] Rejected
Entering Number Booking empty.	Total: {Blank}	Shown message "Number of Orders should be equipped"	Shown message "Number of Orders should be equipped"	[✓] Be accepted [ ] Rejected
Entering vacant land.	Empty land	Shown message "Land should be equipped"	Shown message "Land should be equipped"	[✓] Be accepted [ ] Rejected

**Table 6.** Table Testing Results Showing Campgrounds

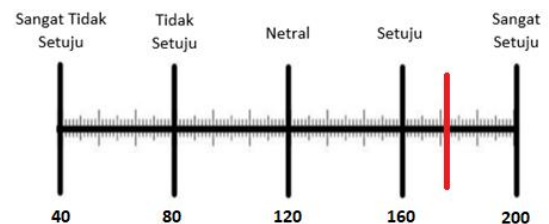
True Data Test Results				
scenario Testing	Data Input	Expected results	Observation result	Conclusion
Displaying the data field camp	-	The system displays the data fields campsite	The system displays the data fields campsite	[✓] Be accepted [ ] Rejected

**Table 7.** Table Testing Results Showing Detail Campgrounds

True Data Test Results				
scenario Testing	Data Input	Expected results	Observation result	Conclusion
Displaying details camp land	Kd_lahan: {code area selected}	The system displays the detail area campground form of picture 360	The system displays the detail area campground form of picture 360	[✓] Be accepted [ ] Rejected

### b. Beta testing

Beta testing is performed to determine whether the application is running in accordance with the purpose of research. Beta testing is done to visitors Campgrounds Rancaupus by distributing a



questionnaire online, here are the results of beta testing:

1. Is Rancaupus application can be easier for you to book a campsite land?

The results of the questions can be seen in Table 8

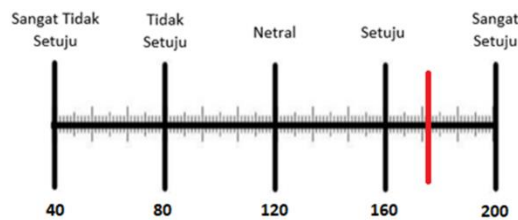
**Table 8.** Calculation Results Table questionnaire Question 1

Category Answers	Score	frequency response	total Score	value Percentage	Decision
Strongly agree	5	19	95	(174 / (41x5)) x 100% = 84.88%	Agree
Agree	4	15	60		
Neutral	3	6	18		



Disagree	2	0	0
Strongly Disagree	1	1	1
<b>total</b>		41	174

Based on the calculation pad Table 8, obtained a total score obtained is 174 with a value of 84.88% percentage yield value so that the scale of the category entered in the category agree. The results of the questionnaire calculation can be concluded that the application is built to simplify the process of land reservations Campgrounds campsite in Rancaupas, the following rating scale interval on question 1 is shown in Figure 9



**Figure 9.** Interval Figure Rating Scale Question 1

2. Is Rancaupas application can be easier for you to book prewedding land?

The results of the questions can be seen in Table

**Table 9.** Calculation Results Table Questionnaire Question 2

Category Answers	Score	frequency response	total Score	value Percentage	Decision
Strongly agree	5	17	85	$(174 / (41 \times 5)) \times 100\% = 84.88\%$	Agree
Agree	4	18	72		
Neutral	3	5	15		
Disagree	2	1	2		
Strongly Disagree	1	0	0		
<b>total</b>		41	174		

Based on the calculations in Table 9, obtained a total score obtained is 174 with a value of 84.88% percentage yield value so that the scale of the category entered in the category agree. The results of the questionnaire calculation can be concluded that the application is built to simplify the booking process prewedding photo in Campgrounds Rancaupas, the following rating scale interval in Question 2 be seen in Figure 10

**Figure 10.** Interval Figure Rating Scale Question

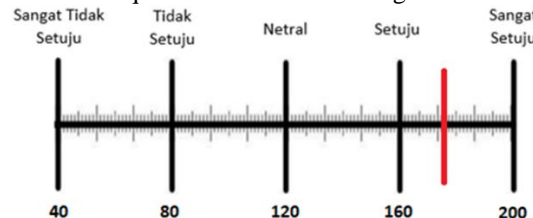
3. Is Rancaupas application can help you to see the location of the camp land?

The results of the questions can be seen in Table

**Table 10.** Table 3 Calculation Results Questionnaire Questions

Category Answers	Score	frequency response	total Score	value Percentage	Decision
Strongly agree	5	21	105	$(174 / (41 \times 5)) \times 100\% = 84.88\%$	Agree
Agree	4	12	48		
Neutral	3	5	15		
Disagree	2	3	6		
Strongly Disagree	1	0	0		
<b>total</b>		41	174		

Based on the calculations in Table 10, obtained a total score obtained is 174 with a value of 84.88% percentage yield value so that the scale of the category entered in the category agree. The results of the questionnaire calculation can be concluded that an application built to help to see the location of the camp land in Campgrounds Rancaupas before making a reservation, the following rating scale interval on question 3 is shown in Figure 11.



**Figure 11.** Interval Figure Rating Scale Question 3

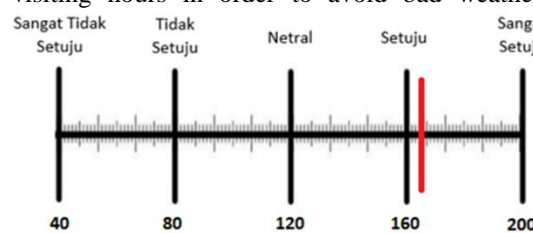
4. Is Rancaupas application can provide recommendations been appropriate time so as to avoid bad weather?

The results of the questions can be seen in Table

**Table 11.** Calculation Results Table Questionnaire Question 4

Category Answers	Score	frequency response	total Score	value Percentage	Decision
Strongly agree	5	12	60	$(163 / (41 \times 5)) \times 100\% = 79.51\%$	Agree
Agree	4	17	68		
Neutral	3	11	33		
Disagree	2	1	2		
Strongly Disagree	1	0	0		
<b>total</b>		41	174		

Based on the calculations in Table 11, obtained a total score obtained is 163 with a value of 83.41% percentage yield value so that the scale of the category entered in the category agree. The results of the questionnaire calculation can be concluded that the application is built to provide recommendations visiting hours in order to avoid bad weather in



Campgrounds Rancaupas time of booking, the following interval ratingscale in question 4 is shown in Figure 12

**Figure 12.** Interval Figure Rating Scale Question 4

5. Is Rancaupas application can provide a good land recommendation?

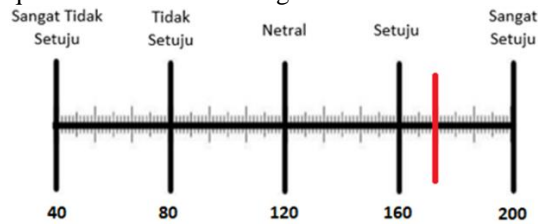
The results of the questions can be seen in 12

**Table 12.** Calculation Results Table Questionnaire Question 5

Category Answers	Score	frequency response	total Score	value Percentage	Decision
Strongly agree	5	15	75	$(171 / (41 \times 5)) \times$	Agree

Agree	4	20	80	100% = 83.41%	
Neutral	3	4	12		
Disagree	2	2	4		
Strongly Disagree	1	0	0		
<b>total</b>		41	171		

Based on the calculations in Table 12, obtained a total score obtained is 171 with a value of 83.41% percentage yield value so that the scale of the category entered in the category agree. The results of the questionnaire calculation can be concluded that the application is built to provide recommendations on the best campsites land Campgrounds Rancaupas time of booking, the following rating scale interval on question 5 is shown in Figure 13.



**Interval Figure 13. Figure Rating Scale Question 5**

### 3. COVER

#### 3.1 Conclusion

Results of research conducted in the preparation of this final project was concluded that the system Smart Campgrounds Rancaupas Applications are built to provide recommendations on the best time to visit, so it is spared the bad weather. Applications built on land can also give a good recommendation to visitors who want to book a campsite and reserve land prewedding photo, before making a booking application Rancaupas can also view the location of the campsite area will be ordered so that visitors do not have to come directly to location.

#### 3.2 Suggestion

Suggestions for the development of Smart Campgrounds Rancaupas applications are as follows:

1. Weather data in this study were drawn from the AccuWeather API where data taken by a weather information service provider has no direct censorship at location Campgrounds Rancaupas so it would be better jika install weather sensors directly on site.
2. The development of more interesting content in order to provide information on all the rides in Campgrounds Rancaupas
3. Development of payment gateway features to facilitate the payment order.
4. The weight of decision-making on the recommendation should be dynamic in accordance with the wishes of the user.

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