

# Concept of Critical Patterns of HCI (Human Computer Interface) Medical Record Using Normal Pls and Distribution of Data

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## ABSTRACT

Component of data information needs related to data type and character length of data will produce manual data input that helps the effectiveness of Human computer interfaces in interacting with other interfaces, this is indicated by the results of the critical path method analysis of Entity admin and the room where the critical path of the two Entities produces admin critical path = 9 and the critical path of the room produces value = 10 from both critical path values developed into direct relationship correlation by using m SmartPLS etode where latent admin predictor variables are directly connected with latent mediator variable room and produce correlation = 1.387 with strong correlation to mediator room, admin predictor correlation direct influence on creation patient = - 1,168 with weak correlation to creation patient, admin Ent shows normal data with value =  $0.06 > 0.05$  and Ent room shows normal data with a value =  $0.06 > 0.05$ . The two test results help in the study of the length of data characters with manual data input functions and maintain data validity against character data lengths that do not meet the input requirements for HCI admin and room.

**Keywords:**Critical Path; Data element; Predictor; HCI; DBMS

## INTRODUCTION

A design is an information concept that is used to assist in user interface design. Interface design affects the performance of the DBMS system (Data management system) because the database runs on the data elements needed in the information environment that uses it. The study mentioned above is the initial information relating to interface design that will be used in running the PL (Software). Health data is data information that is very important in the development of the interface design concept because the elements affect the organization's performance system in carrying out information used by system users. In developing the medical record interface design, the data element is an information system design concept that has relevance to other data elements. The author analyzes the elements of medical record data relating to the elements of data: 1) Admin, 2). Room and 3). Patient data elements have data components, each element has different data component information. (Amdd, Practices, and Requirements 2008)

Data elements consisting of data components related to data type and character length data from each data element giving the length of character data in the data element is not easy, for the initial study you must analyze information data from data elements by looking at the admin, space and patient data report, this is done to find out how far the character data is used by the system when the system is running with all inputted data information, these results can be analyzed using the CFP (Cruf Functions Point) method with see 14 (Fourteen) information components of the data in the form of the length of character data used. The above method is very helpful in resolving problems in the design interface development. Each data element is used and provide a study of problems and the completion of information on medical record data in the form of database management systems. The author sees the data element used has a very important problem to note especially in the length of character data in each data element the DBMS capacity will be seen when the character length of the data has been determined the greater the character length the data used will affect the data element's performance when used by user or other system user. (Trisnato and Lala 2016)

Clarity in completing the character length of data in managing the DBMS system medical record data is very important this is proven by design interface Data elements are used when the concept of data elements is created by using cardinality data that gives character data lengths in 200 data components and 100 this greatly influences the performance of the HCI (Human Computer Interface) system, data elements that are interrelated with other data elements slow down the performance of manual data input when used with report results that provide free space in data components given data characters 200 and 100. The problem the authors carried out the concept method of changing the character length of the data by not looking at the information environment that is in place of the data information input manual used. (Bisnis 2006)

By using the spiritual path method on the character data length so that the medical record data information component each component of information data can be replaced with the resulting critical path domain, data components that have been analyzed using the critical path can be continued using the PLS method where the admin predictor variable can be seen the relationship between the data with creations and mediators so that the quartic and moderating methods explain the variables domain creations and mediators can provide information on the relevance of each variable when manual data input is used by providing inputted data information. From these results, the length of the data character will carry out exploratory test stages by looking at the distribution of the data produced, whether negative or positive, in the form of normally distributed data from these results. Pitoyo, Djuwadi, and Yudho 2018)

## METHOD

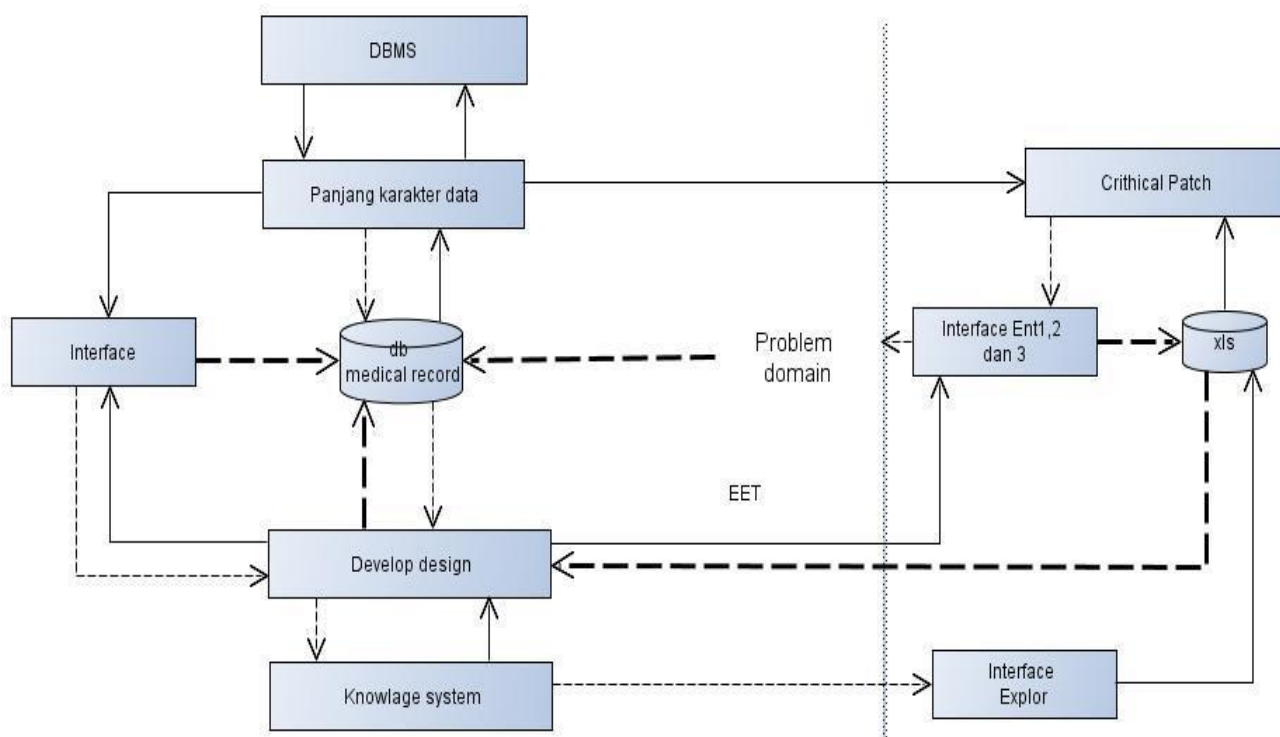


Figure 1: CP expert system method

Figure 1 describes the method of the expert system CP neighbor expert system used in assessing the long-term performance data when the domain of data is entered in accordance with the type of character data used. DBMS as user information that explains database system management to be managed in the form of data elements as data attributes in the form of data character lengths, giving desing interfaces information on the length of character data that is managed as a problem in the database (db) input information interface design elements admin data and space shows information references to the develop engine by using the EET critical path method where the interface faces are fixed in accordance with the node path used. Knowledge of the system used to make changes to the interface information has been improved with the PLS method and explorers where each data input interface in the choreasi path test to each variable is inputted to the explor method to find out the QQ-Pot diagram is long the character of the data that has been fixed in the critical path

has normal data information where all attributes are in the line position and do not experience the form of the path indicated to have the same path. So that the length of the data parameters used in the admin data element and its attribute space is determined by the level of user needs and the space use system performance can run according to the real data information needs used (Trisnanto et al. 2019)

### Element data Data

elements are data information related to data attributes that explain the data attribute functions that are used, by providing data types and character lengths of data so that data elements are related to the function of data known to map functions of process information data attributes that are running.

Table 1 Admin data elements

Activities	Description	LD <sub>domain length</sub>
A	Creation of Entity Admin	5
B	User Id	4
C	User User	20
D	Password	200
E	Username	100
F	Level	0

Table 2 Data Elements Room

Activity	Description	LD <sub>domain length</sub>
A	Making the Entity Room	5
B	Id Room	5
C	Name Room	20
D	Classroom Level	0
E	Room Price	200
F	Email Room	200

Table 1 Admin data elements describe the information data component used divided into 3 (three) Activities, Description and LD<sub>domain lengths</sub> component describe each information functions delivered such as: A = Activity with description = Making Entity Admin and LD<sub>longdomain</sub> describes the character length of the data used = 5 (five) taken from the data attributes used.

Table 2 Spatial data elements describe the information data component used divided into 3 (Three) Activities, Description and LD<sub>domain length</sub> component describes each function of information delivered such as: A = Activity with description = Making Entity Room and LD<sub>domain length</sub> explain the character length of the data used = 5 (five) taken from the data attributes used.

### HCI (Human Computer Interface)

Management interface design is a management design that is used to determine the extent to which HCI management information is related to the element of the cardinality level of the data associated with the information needs used.

id int(4)

user\_id char(20)

password varchar(200)

nama varchar(100)

Level enum --

idruang varchar(5)

nama\_ruang varchar(20)

kelas enum --

harga\_ruang varchar(200)

jumlah\_TT varchar(200)

Go

Go

(a)
(b)

(a) HCI Admin has data component information including: 1). Attributes with data component information related to attribute names that explain the functions and uses of each attribute with the type of data used and the length of character data used by the stressing information used in attribute (b) data component information includes: 1). Attributes with information component data relating to the price of the attribute space that explains the function and usefulness of each attribute with the data type used and the length of character data used stressing information used in attribute

### Space Usage Entity

Space Usage Entity explains the information needs of the storage space for manual input data entered into Entity Admin and Space so that the data generated in the form of data types and character lengths of data used can be seen the performance and function of the information system that is running.

Table 3 Space Usage Admin

Data	Index	Total
0 B	1 KiB	1 KiB

Table 4 Space Usage

Data	Index	Total
0 B	1 KiB	1 KiB

Table 3 Space Usage Admin from the table describes information component data used related to data functions with Bite Data Index 1 KiB data explains 1 KiB = 2064 data said that data inputting information that can be used from Entity Admin is given Space Use = 2064 space with that information password = 200 and name attribute = 100 has a length of data character which reduces Space use Entity Admin and reduces perfex texfile interface when the Entity admin input is run. Table 4 Space Use Space from the table describes the data component information used related to data functions with Bite data Index 1 KiB data explains 1 KiB = 2064 data said data inputting information that can be used from Entity Admin is given Space Use = 2064 with information the space price attribute = 200 and the email attribute space = 200 have long data characters that reduce the Space use Entity Admin and reduce the texfile interface in performance when the Entity admin input is run (Azzeh, Hijjawi, and Altamimi 2018)

## RESULTS AND DISCUSSION

### System Performance Critical Path System

Performance critical pathway from the results of expert system methods to determine the critical path used for Admin and Space Data Elements produces information on the length of character data that has high stressing in

the character length password = 200, name = 100 and space name = 20 so as to produce the DFD Level 0 method with the following explanation:

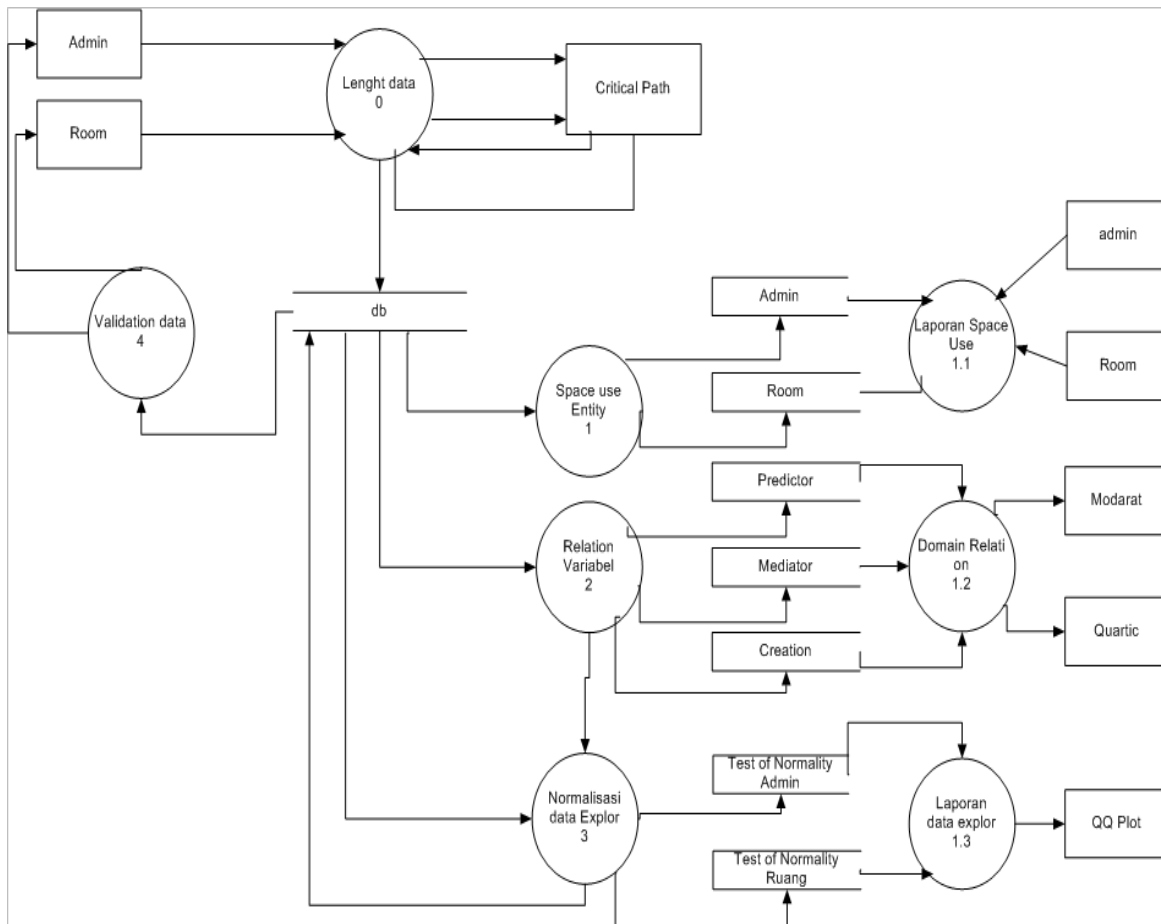


Figure 2: DFD Level 0 Critical Path System Performance

Source data that produces 2 (two) Entity Admin and Room data sources that are terminated into level 0 data character lengths with data packet input in the form of elements admin data and space produce the destination data as a critical path method for the two data elements, the database as source of information provides information that produces information on the critical path 1 stored in the Entity Admin and both processes are processed into the Space Use 1.1 report process with data collected from entity admin report and room. Relation variable 2 provides information into the source method: a) Predictor, b) Mediator, c) Creation of the three sources is processed into the report Domain relation 1.2 with information reports form the Derverging report (Spread) into strong and weak relations with the Quartic and Moderatic methods each provides a detailed explanation of the strength or weakness of predictor variables and mediators on creation variables. The process of normalizing exploratory 3 data is stored with the admin test and normality method with the data explore report process with the form of QQ port results report. Validation 4 process comes from variable relation process 2 and data exploralization normalization 3 which provides information on black hold method where the output produced does not show the input and process due to process 4 data validation issues destination data to Entity admin and room by providing information on character length change by using the critical path method (Trisnanto et al. 2017)

### Results of critical path performance Admin data elements

The results of critical path performance admin data element is a critical path method where node 1 as predecessor is connected to line 2 =  $\text{Max} \{ \text{CpEnt}_1 + D_{\text{domain}12} \}; \{ \text{CpEnt}_1 + D_{\text{domain}13} \}$  node 2 is connected to the next larger path =  $\text{Max} \{ \text{CpEnt}_2 + D_{\text{domain}23} \}; \{ \text{CpEnt}_2 + D_{\text{domain}24} \}; \{ \text{CpEnt}_2 + D_{\text{domain}25} \}$  node 5 as the path that connects to the largest number next =  $\{ \text{CpEnt}_5 + D_{\text{domain}56} \}$  node 6 as Sucessor connected to the last largest node =  $\{ \text{CpEnt}_6 + D_{\text{domain}67} \}$  in Figure 3. Admin data element

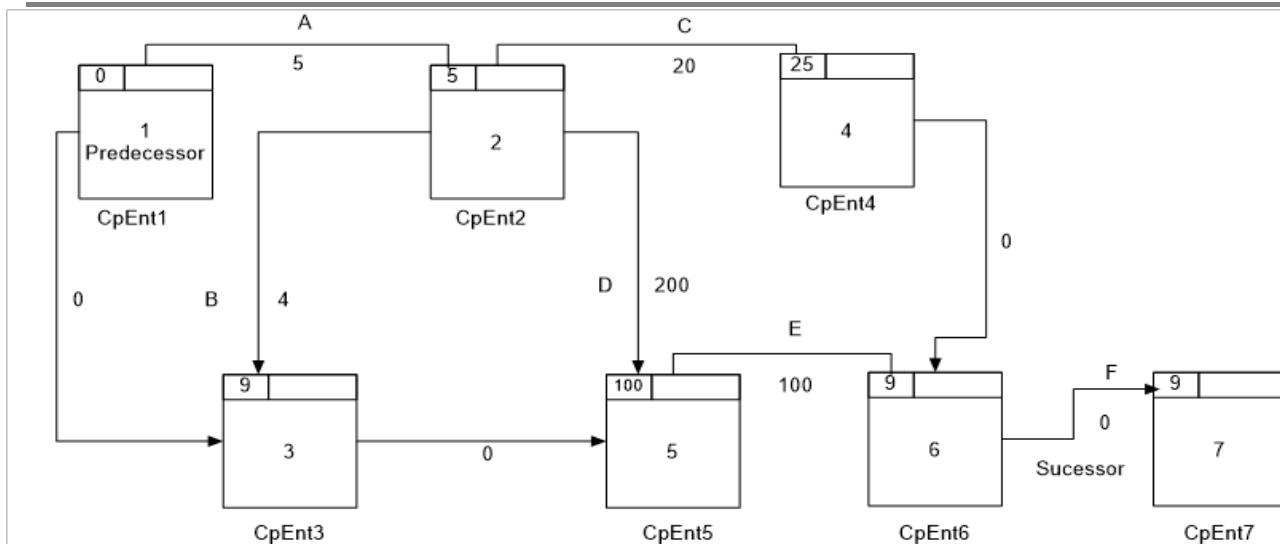


Figure 3: Admin data elements

### Results Critical path performance Space data elements

Results of critical path performance admin data elements are critical path methods where node 1 as predecessor is connected to line 2 =  $\text{Max} \{ \text{CpEnt}_1 + D_{\text{domain}12} \}; \{ \text{CpEnt}_1 + D_{\text{domain}13} \}$  node 2 is connected to the next larger path =  $\text{Max} \{ \text{CpEnt}_2 + D_{\text{domain}23} \}; \{ \text{CpEnt}_2 + D_{\text{domain}24} \}; \{ \text{CpEnt}_2 + D_{\text{domain}25} \}$  node 5 as the path that connects to the largest number next =  $\{ \text{CpEnt}_5 + D_{\text{domain}56} \}$  node 6 as Sucessor connected to the last largest node =  $\{ \text{CpEnt}_6 + D_{\text{domain}67} \}$  in Figure 4. Space data element (Trisnanto, Mulyadi, and Fadila 2017)

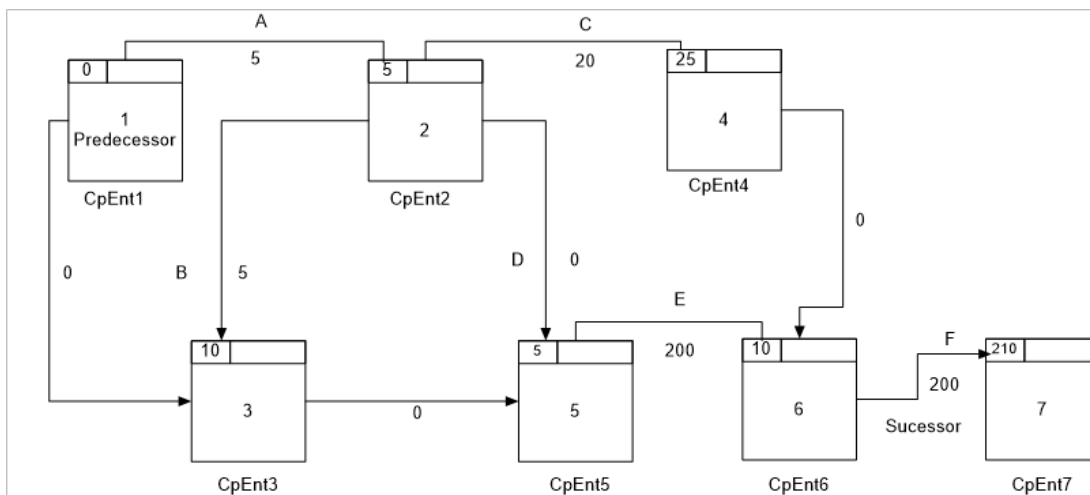


Figure 4 Space data elements

### Smart PLS variable relations The

etervining design construct describes latent variables with observations of values depicted from the latent variables of the construct explained admin Ent variables with observation = 1, observation Ent room = 1, observing patient = 1 Ent according tosiq = 0.07 where the observation of the outhter load test is > 0.7 so that the value of observing latent variables is accepted. The next test carried out intervening testing by looking at the latent predictors of the admin variable on the latent creations of patient variables with the relation of very weak correlation relationships with the value = - 1,166. The results only depicted the latent second relations variable to determine the patient's latent variable strength testing using the moderating effect admin towards latent variable passivity by producing correlation correlation = 0.738 very strong with creation value = 0.734 where patient latent variable is affected by predicator equal to 0.734 latent admin variable intervening towards latent Ent room variable of 0.412 with weak correlation this is seen intervening with mediator Etn room with correlation = -0.581 is very weak from these results indicating the mediator Ent room does not have a correlation that affects predictors, the mediator has a very strong correlation with creation patient with



correlation = 0.778 very These strong results can explain the correlation of critical path relationships resulting from the character length values used in each admin Ent, room and Patient Figure 5.

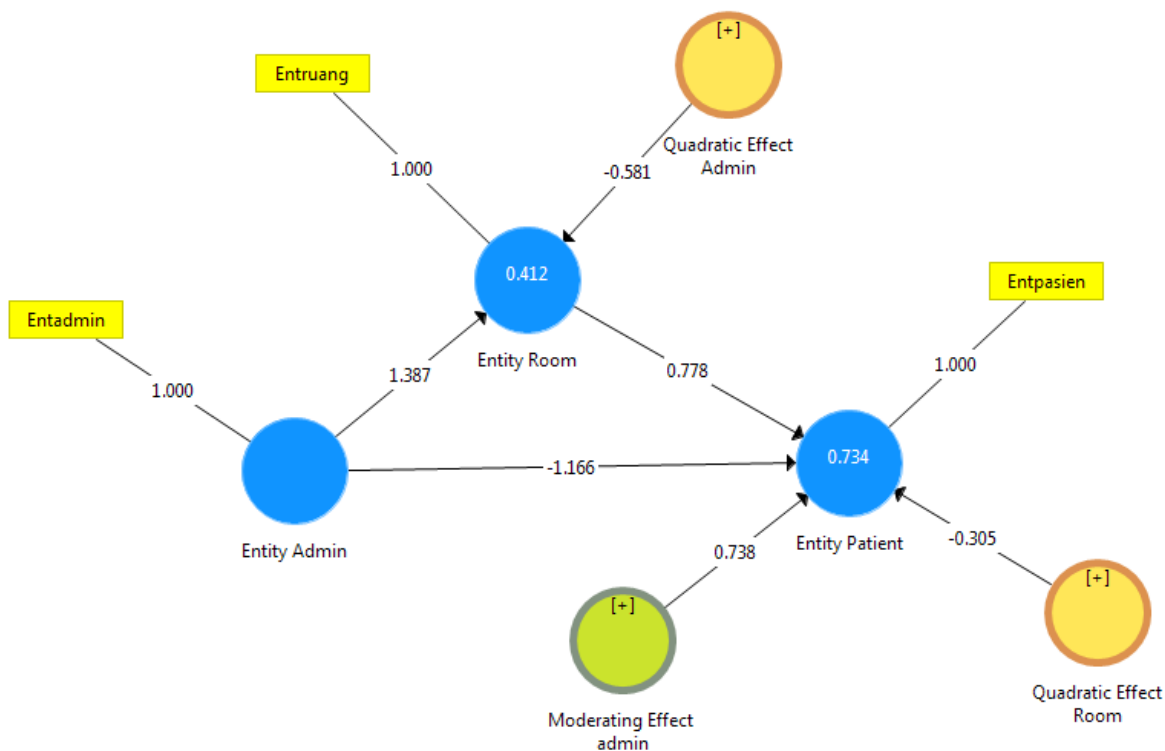


Figure 5: Evening construct

### Normality Test Results

(a) Admin entries show normal data with a value = 0.06 > 0.05 and (b) Ent room shows normal data with a value = 0.06 > 0.05 both of these test results help in the study of length of character data with manual input data functions and maintain validity data on the length of character data that does not meet the requirements in inputting data against the HCI admin and room. (Alfidella, Kusumo, and S nd)

#### One-Sample Kolmogorov-Smirnov Test

		Entadmin
N		7
Normal Parameters <sup>a,b</sup>	Mean	22,43
	Std. Deviation	35,052
Most Extreme Differences	Absolute	,363
	Positive	,363
	Negative	-,261
Test Statistic		,363
Asymp. Sig. (2-tailed)		,006 <sup>c</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

(a)

#### One-Sample Kolmogorov-Smirnov Test

		Entruang
N		7
Normal Parameters <sup>a,b</sup>	Mean	9,29
	Std. Deviation	7,868
Most Extreme Differences	Absolute	,321
	Positive	,321
	Negative	-,150
Test Statistic		,321
Asymp. Sig. (2-tailed)		,028 <sup>c</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

(b)

## QQ-Plot test results

(a) show the path diagram of data normalization that does not have the same shape nodes are not in the same line with the same path form here shows that the node has a normal data distribution (b) node shows the path that is in the line with one of the nodes comes out of the line and does not affect the normal data functions and requirements that occur and has a significant value towards (a).

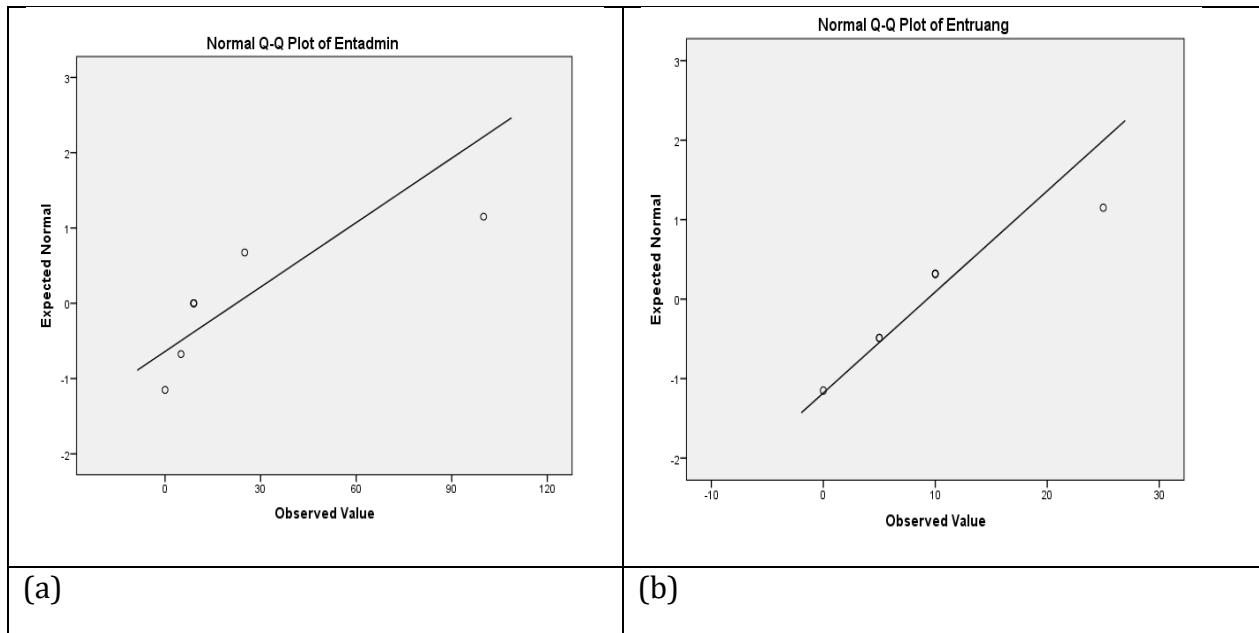


Figure 3: Results of storage performance

## Results of Critical Path Equations

The results of critical path equations produce equation 1, equation 2, equation 3, and equation 4 with the results of the study explaining the stressing of information data which will produce  $LD_{domains}$  according to the character length of data used in the appropriate data information HCI Ent with the user data information environment, with the description of the formula as follows:

For the beginning of the EEI, the initial activity in the critical path node starts with zero, meaning		
	$Ent_1 = 0$	(1)
EI for each activity (i, j) is the same as the previous event, meaning		
	$Ent_{ij} = E_i$	(2)
EE for each activity (i, j) is equal to EI plus $L_{domain}$ Activity, meaning		
	$EE_{ij} = EI_{ij} + LD_{domain}$	
or	$EE_{ij} = E_i + L_{domain}$	(3)
EEI for event j is the max EE of all activities ending in the event.		
	$E_j = \max (EE_{ij} \text{ for all predecessors } (ij))$	
	$E_j = \max E_i + L_{domain}$	(4)
Where $LD_{domain}$ is the character length of data in this calculation, the activity is identified by the predecessor node (or event) i and nodeProcessor Design j		



### Results Direct Effect on latent predictor variables, mediator and creation:

Direct influence the latent Predicor Admin variable towards Creation patient		
	$t > 0.05$	(5)
Where t is a predictor that influences creation by moderating the admin effect by correlating the existence of linkages associated with the results of the picture 5		
The direct effect of the Predicor Admin latent variable on Me diator Room		
	$t > 0.05$	(6)
Where t is a predictor that influences the Mediator by moderating the effect of the admin by correlating the existence of a related relationship with the results of the image 5		
The direct effect of the Predictor Admin latent variable on the Mediator		

From the results of the two equations the data normality results in the image (a) Admin Ent show normal data with a value =  $0.06 > 0.05$  and (b) Ent room shows normal data with a value =  $0.06 > 0.05$  the two test results help in the study of the length of character data with manual data input functions and maintain data validity against data character lengths that do not meet requirements in inputting data on HCI admin and room. (Monecke and Leisch 2012)

## CONCLUSION

The critical path method for measuring the length of character data used in determining data elements is a very important data information requirement. This is related to the function and performance of HCI in storing data information input into the DBMS and knowing the level of effectiveness of the length of data characters used so that the Space used KiB of each HCI can be known to function as a storage and inputted data information. The long character of the data as latency variable correlation helps in knowing the level of correlation to other variables so that it can immediately improve the character length of the data that has been generated by looking at the QQ-port attribute diagram which has a critical path where the path model is far from the line path in QQ-ports so that these attributes can be re-evaluated about the length of data characters used and the HCI user environment in the user's work activities in the field of information data management and management.

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