

CHAPTER IV

ANALYSIS AND DESIGN

4.1 Analysis

4.1.1 Use Case Diagram

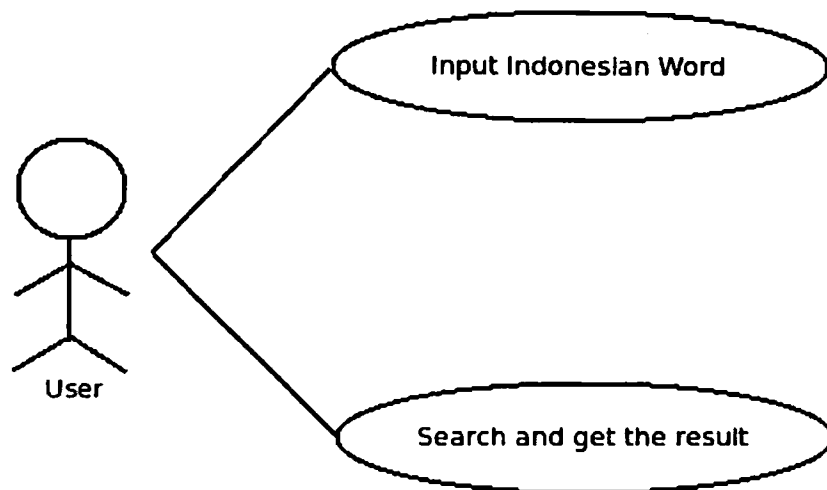


Figure 4.1.1 Use Case Diagram

This use case diagram is show that the user will input the Indonesian word which it will be a keyword for the searching process of Paritta. When the user input a Indonesian word, it will be search or translate first to the Pali word, but the result from its translate will not show to the user. After find the Pali word which the result of translate from Indoesian word, then the Pali word will be search again to the data of Paritta which the contents of each Paritta is contains the Pali word. If the Pali word is match with one or some Paritta, then the Paritta's title and Paritta's contents will be the final result to be displayed to the user.

4.1.2 Flow Chart Diagram

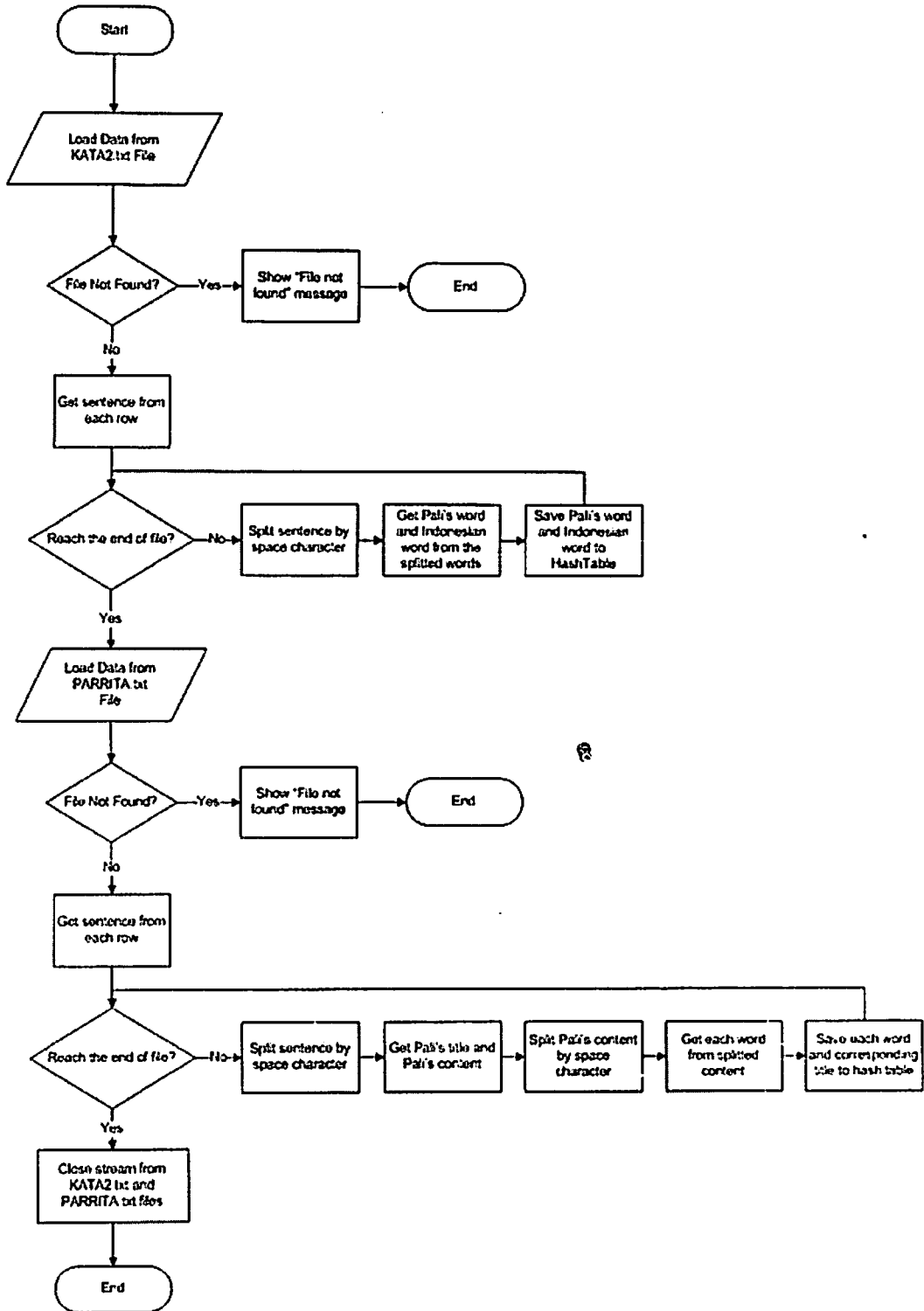
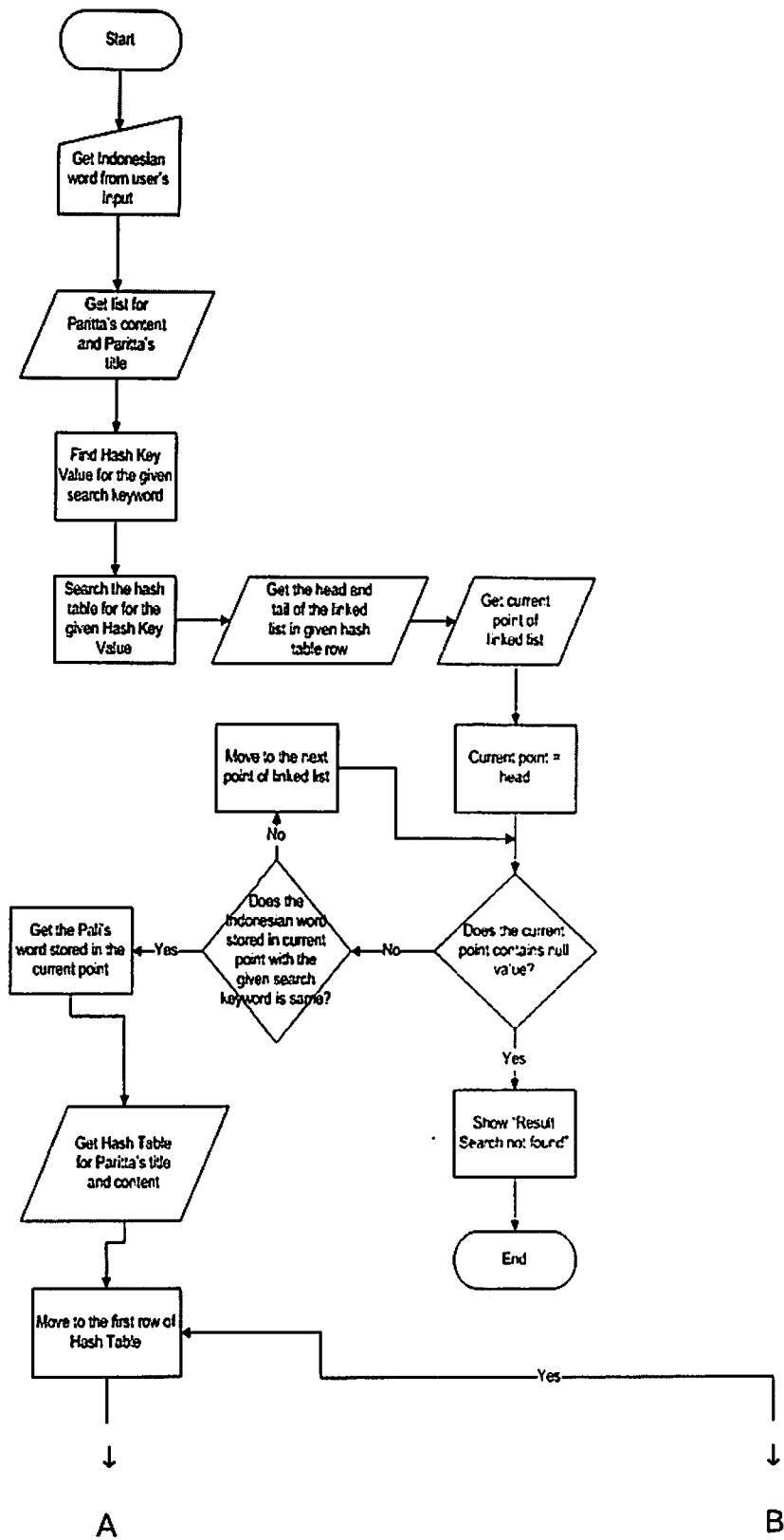


Figure 4.1.2.1 Flow Chart of Read File & Load Data



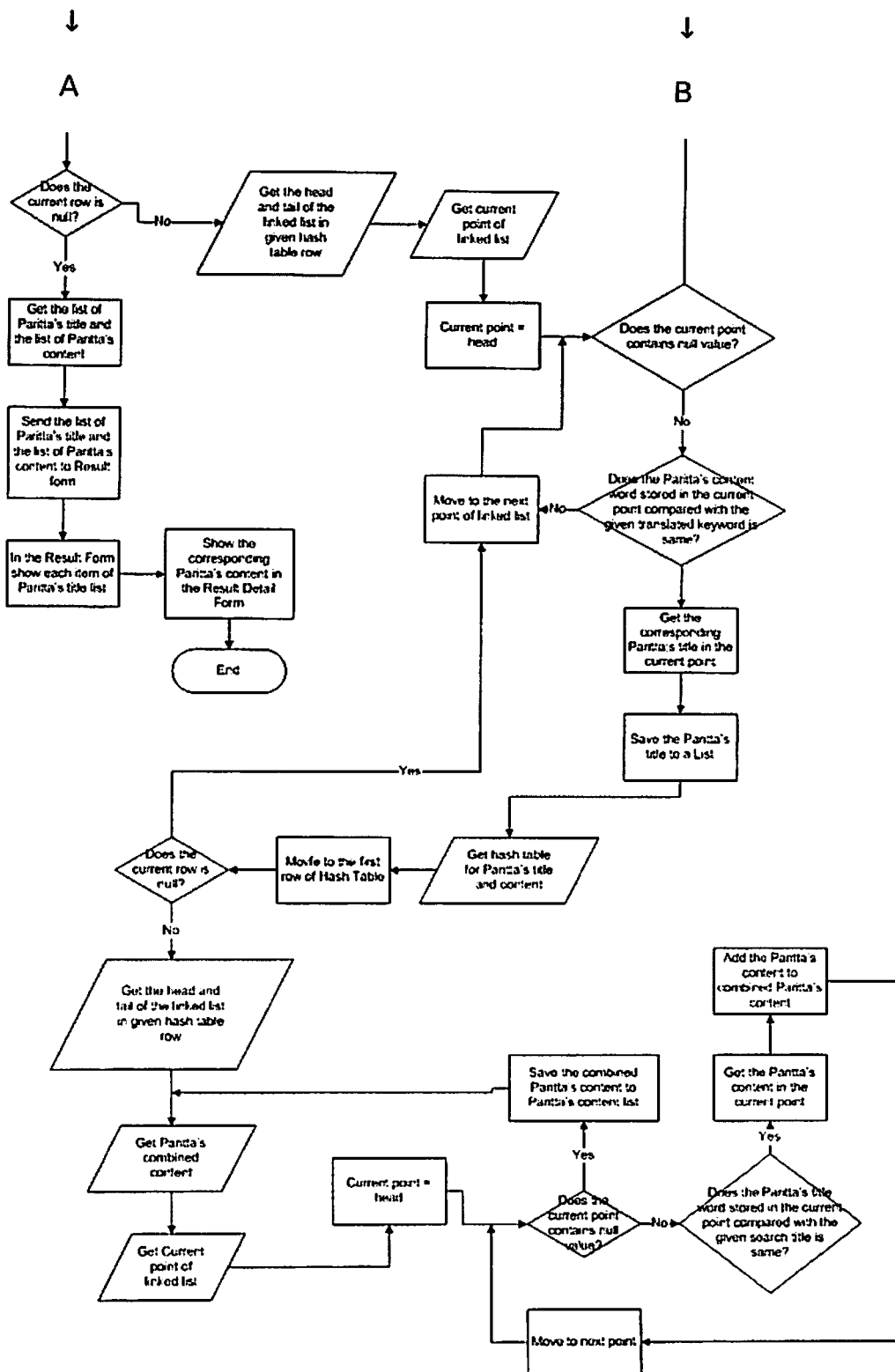


Figure 4.1.2.2 Flow Chart of Searching Process

4.2 Design

4.2.1 Class Diagram

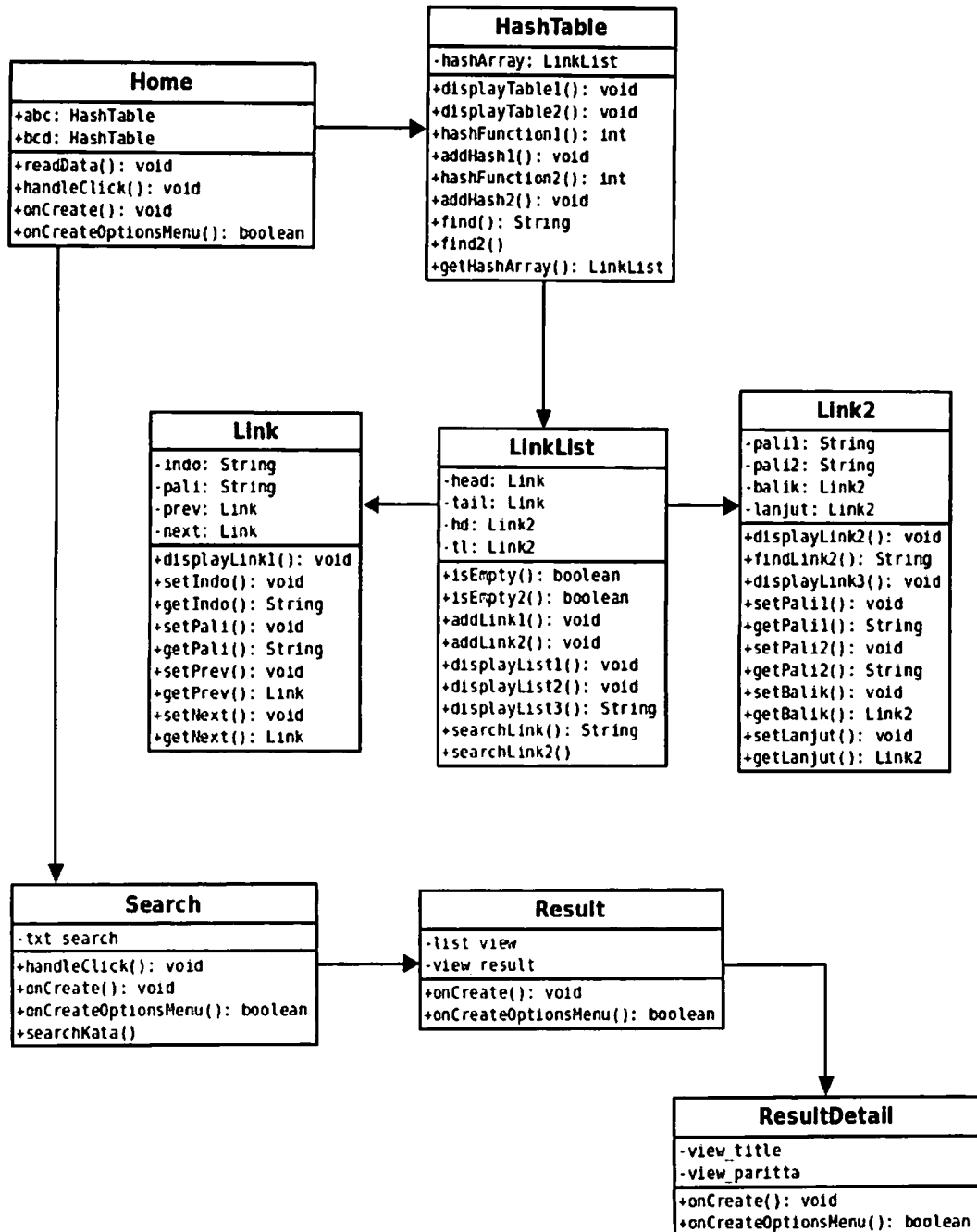


Figure 4.2.1 Class Diagram

The communication between all of these class starts from Home class as it load all of the data from txt file and keep it in the form of HashTable class. The HashTable class will be mainly operates for save and access the data in a hash table. The HashTable class use array of LinkList class which will be used to access and search through the linked list of Link and Link2 class. The Link class will storing the data of Indonesian word and Pali word, meanwhile the Link2 class will storing the data of Paritta's title and Paritta's content. The Search class have an input text for search the keyword from the user and will search the translate of Indonesian word which is inputed by the user to the Pali word. After the Pali word is finded, then the Pali word will be search again to the data of Paritta. If the Pali word is match with the data of Paritta, then the Result class will show the list of Paritta's titile only, but when the user is choose one of the Paritta's title, then the ResultDetail class will show the Paritta's title and Paritta's content which is chosen before.

4.2.2 Class Diagram Details

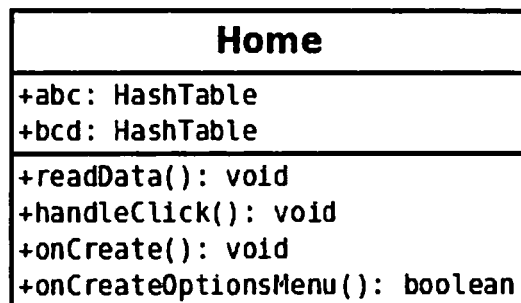


Figure 4.2.2.1 Home Class

The Home class is a class which the communication of all classes started. This class have two attributes which abc is the hash table of Indonesia-Pali word and bcd is the hash table of Paritta. The Home class load all data from txt file and keep it in the form of HashTable class objects.

HashTable
-hashArray: LinkList
+displayTable1(): void
+displayTable2(): void
+hashFunction1(): int
+addHash1(): void
+hashFunction2(): int
+addHash2(): void
+find(): String
+find2()
+getHashArray(): LinkList

Figure 4.2.2.2 HashTable Class

The HashTable class use array of LinkList class objects for controlling the linked list of Link class and Link2 class. The HashTable class will be the mainly operates for save and access the data in a hash table.

LinkList
-head: Link
-tail: Link
-hd: Link2
-tl: Link2
+isEmpty(): boolean
+isEmpty2(): boolean
+addLink1(): void
+addLink2(): void
+displayList1(): void
+displayList2(): void
+displayList3(): String
+searchLink(): String
+searchLink2()

Figure 4.2.2.3 LinkList Class

The LinkList class will be used to access and search through the linked list of Link and Link2 class.

Link
-indo: String -pali: String -prev: Link -next: Link
+displayLink1(): void +setIndo(): void +getIndo(): String +setPali(): void +getPali(): String +setPrev(): void +getPrev(): Link +setNext(): void +getNext(): Link

Figure 4.2.2.4 Link Class

The Link class is used for storing the data about the Indonesian word and the Pali word.

Link2
-palil: String -pali2: String -balik: Link2 -lanjut: Link2
+displayLink2(): void +findLink2(): String +displayLink3(): void +setPalil(): void +getPalil(): String +setPali2(): void +getPali2(): String +setBalik(): void +getBalik(): Link2 +setLanjut(): void +getLanjut(): Link2

Figure 4.2.2.5 Link2 Class

The Link2 class is used for storing the data about the Parrita's title and the Pariita's content.

Search
-txt_search
+handleClick(): void +onCreate(): void +onCreateOptionsMenu(): boolean +searchKata()

Figure 4.2.2.6 Search Class

The Search class will be called while the user press Enter Button on the screen. The Search class have an input text for search keyword and while the user search keyword and press the search button, it will search through the HashTable class for given search keyword. The searching process is search the Pali word through the hash table for given search keyword. The Pali word will be used for searching the list of Paritta's title and Paritta's content which contains the translate of Pali word. The result of this searching process will be passed to the Result class.

Result
-list_view -view_result
+onCreate(): void +onCreateOptionsMenu(): boolean

Figure 4.4.2.7 Result Class

The Result class will show the list of Paritta's title and while the user choose one of these title, then the corresponding Paritta's content will be passed to the ResultDetail class.

ResultDetail
-view_title -view_paritta
+onCreate(): void +onCreateOptionsMenu(): boolean

Figure 4.4.2.8 ResultDetail Class

The ResultDetail class will show the Paritta's title and Paritta's content which is chosen before.