16TIN2074 – Struktur Data dan Algoritma Praktek

Pseudocode dan Representasi Studi Kasus 2

Dikerjakan oleh:

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1AD4 Jurusan Teknik Komputer dan Informatika

Tugas ini dikumpulkan untuk memenuhi sebagian persyaratan kelulusan
mata kuliah Struktur Data dan Algoritma Praktek

Program Studi D4 Teknik Informatika

Jurusan Teknik Komputer dan Informatika

Politeknik Negeri Bandung

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1. **CreateList**
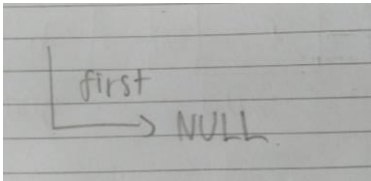   - **Pseudocode**

```
/* Crate List Karakter*/
 {KAMUS DATA}
   Record  Elmntlist < info : char, next : Elmntlist^ >
   Record  List < first : Elmntlist^ >
   myList : List
 {ALGORITMA}
   BEGIN
     myList <- Alloc()
     myList^.first <- NULL
   END
```
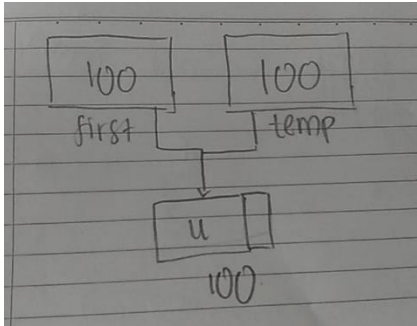
   - **Representasi**

2. **Insert Huruf Pertama dengan Value 'u'**
   - **Pseudocode**

```
/* Insert Huruf Pertama, value 'u' */
 {KAMUS DATA}
   Record  Elmntlist < info : char, next : Elmntlist^ >
   Record  List < first : Elmntlist^ >
   myList : List
   temp : Elmntlist^

 {ALGORITMA}
   BEGIN
     temp <- Alloc('u')
     temp^.next <- myList^.first
     myList^.first <- temp
   END
```
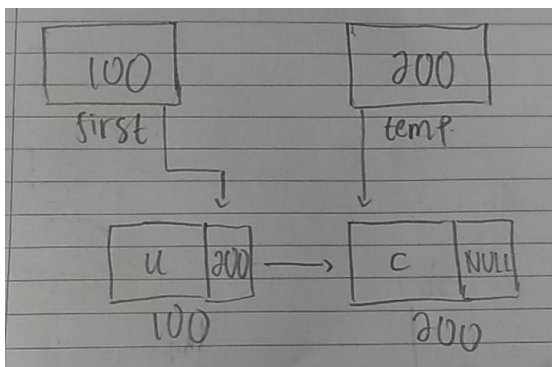
- **Representasi**

3. Insert value 'c' Setelah Huruf Pertama

- **Pseudocode**

```
/* Insert value 'c' setelah huruf pertama*/
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
  temp : Elmntlist^

{ALGORITMA}
  BEGIN
    temp <- Alloc('c')
    temp^.next <- NULL
    myList^.first <- temp
  END
```
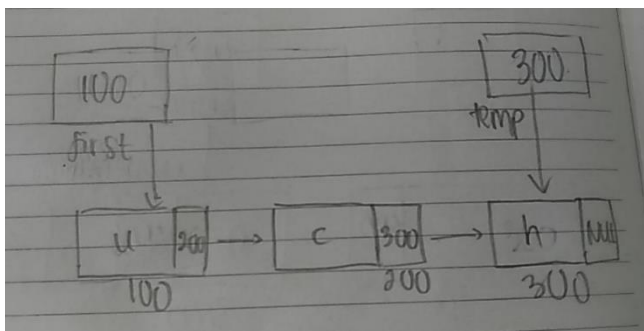
- **Representasi**

4. Insert value 'h' Setelah Huruf Kedua

- **Pseudocode**

```
/* Insert value 'h' setelah huruf kedua*/
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
  temp : Elmntlist^

{ALGORITMA}
  BEGIN
    temp <- Alloc('h')
    temp^.next <- NULL
    myList^.first^.next^.next <- temp
  END
```

- **Representasi**

5. Insert value 'i' Setelah Huruf Ketiga

- **Pseudocode**

```
/* Insert value 'i' setelah huruf ketiga*/
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
  temp : Elmntlist^

{ALGORITMA}
  BEGIN
```
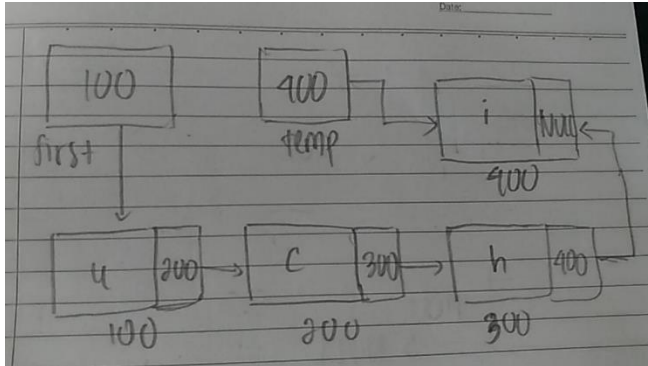
```
      temp <- Alloc('i')
      temp^.next <- NULL
      myList^.first^.next^.next^.next <- temp
   END
```

- **Representasi**

6. Insert value 'n' Setelah Huruf Pertama

- **Pseudocode**

```
/* Insert value 'n' setelah huruf pertama*/
{KAMUS DATA}
   Record  Elmntlist < info : char, next : Elmntlist^ >
   Record  List < first : Elmntlist^ >
   myList : List
   temp : Elmntlist^

{ALGORITMA}
   BEGIN
      temp <- Alloc('n')
      temp^.next <- myList^.first^.next
      myList^.first^.next <- temp
   END
```
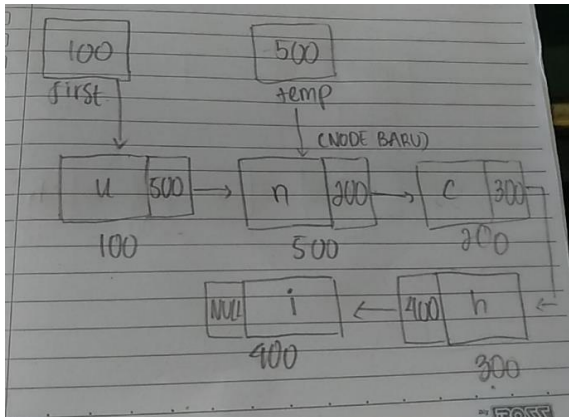
- **Representasi**

7. Delete value 'I' pada elemen list

- **Pseudocode**

```
/* Delete Value 'I' pada elemen list*/
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List

{ALGORITMA}
  BEGIN
  Pointer of ElmntList P  <- L.First
  pointer of ElmntList Pdel
  while (P^.next != null and P.info != X)
  then
      P <- P.next
  endwhile
  if (P.info = X)
  then
      DelAfter(L,Pdel,P)
      Dealokasi(Pdel)
  endif
END
```
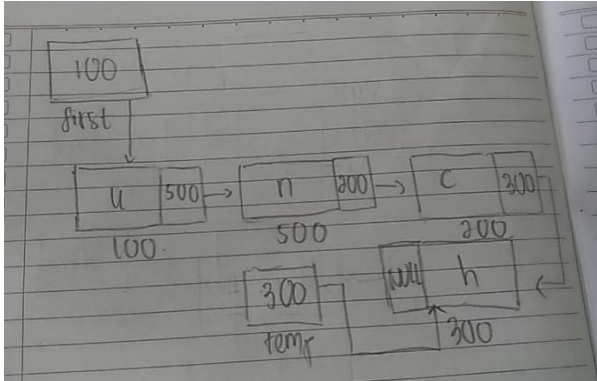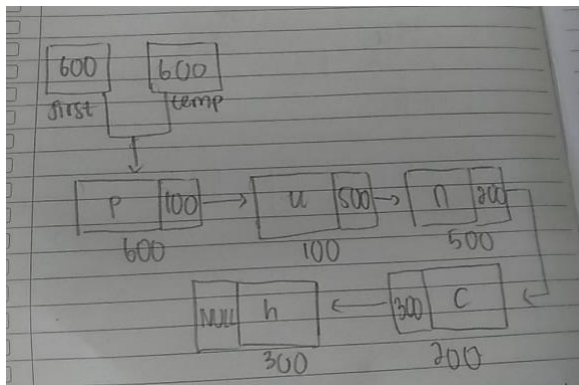
- **Representasi**

8. Insert Value 'p' di Awal List

- **Pseudocode**

```
/* Insert Value 'p' di awal list */
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
  temp : Elmnlist^

{ALGORITMA}
  BEGIN
    temp <- Alloc('n')
    temp^.next <- myList^.first^.next
    myList^.first^.next <- temp
  END
```
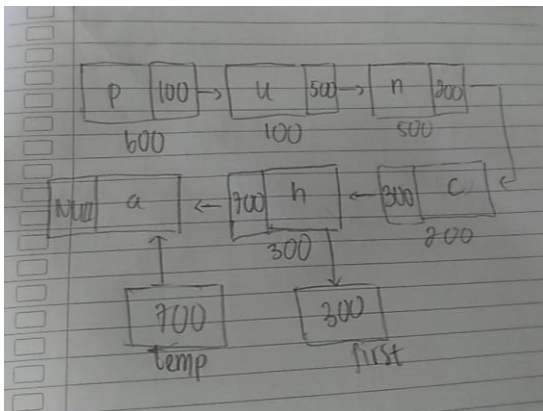
- **Representasi**

9. Insert Value 'a' Setelah Huruf 'h'

- **Pseudocode**

```
/* Insert Value 'a' Setelah Huruf 'h' */
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List

{ALGORITMA}
  BEGIN
  pointer of ElmntList P <- Search1(L,'h')
  pointer of ElmntList Q <- Alokasi('a')
  if (P not null)
  then
      Q^.next <- P^.next
      P^.next <- Q
  endif
  END
```

- **Representasi**

10. Show Semua Elemen Karaketer

- **Pseudocode**

```
/* Show semua elemen karakter */
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
```

```
{ALGORITMA}
  int i
  pointer of ElmntList P <- L.First
  if (P not null)
  then
      write("List Kosong !\n")
  else
      do
          write(P^.Info)
          P <- P.next
          i++
      while P not null
  endif
  write("\n")
  END
```

- **Representasi**

```
puncha
```

11. Cara huruf 'h' pada list

- **Pseudocode**

```
/* Cari huruf 'h' pada List */
{KAMUS DATA}
  Record  Elmntlist < info : char, next : Elmntlist^ >
  Record  List < first : Elmntlist^ >
  myList : List
  temp,current : Elmnlist^
  I : integer
  isFound : boolean

{ALGORITMA}
  BEGIN
i <- 1
isFound <- .FALSE.
current <- myList.first
WHILE (current != NULL AND isFound = .FALSE.) DO
  IF (current^.info = 'h') THEN
```

```
      Output(layar) i
        isFound <- .TRUE.
    END IF
    current <- current^.next
    i <- i + 1
  END WHILE
  IF (isFound = .FALSE.) THEN
  Output(layar) "tidak ada"  END IF
END
```

```
Huruf 'h' berada pada posisi elemen ke-5
```

12. Delete Semua Karakter
   - **Pseudocode**

```
/* Delete Semua Karakter*/
  {KAMUS DATA}
    Record  Elmntlist < info : char, next : Elmntlist^ >
    Record  List < first : Elmntlist^ >
    myList : List
    temp, current : Elmnlist^

  {ALGORITMA}
BEGIN
  current <- myList.first
  WHILE (current != NULL) DO
    temp <- current^.next
    Dealloc(current)
    current <- temp
  END WHILE
  myList.first <- NULL
END
```

   - **Representasi**