

No. _____
Date _____
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① a.) buatlah deklarasi dari list dari linked list di atas.

```
type infotype : real
type adr      : pointer to Elmlist
type Elmlist <
  info : infotype
  next : adr
>
type List <
  first : adr
>
```

b.) Procedure CreateList (in/out L:List)

kamus

Algoritma

L.first : NULL

endprocedure

c.) Procedure NewElm (in X:infotype, out P:adr)

kamus

Algoritma

allocate (P)

P → info = X

P → next = NULL

endprocedure

d.) Procedure InsertAscending (in/out L:List, in P:adr)

kamus

Q, R : adr

Algoritma

Q = NULL

R = L.first

while R ≠ NULL and P → info > R → info do

Q = R

R = R → next

endwhile

```
if Q != NULL then
    P->next = Q->next
    Q->next = P
```

```
else
```

```
    P->next = L.first
```

```
    L.first = P
```

```
endif
```

```
endprocedure
```

② a.) Function search (L : List, X : infotype) → adr

kamus

P : adr

Algoritma

P = L.first

while P != NULL and P->info != X do

P = P->next

endwhile

return P

endfunction

b.) Procedure delete (in/out L : List, in X : infotype, out P : adr)

Kamus

search (L : List, X : infotype) → adr

Q : adr

Algoritma

P = search (L, X)

if P == NULL then

output ("Tidak ada")

else if P->next == NULL then

P = deleteLast (L)

else if P == L.first then

P = deleteFirst (L)

else

Q = P

P = deleteAfter (L)

endprocedure

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Procedure deleteFirst (in/out L: list, out P: adr)

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L.first = P → next

P → next = NULL

endprocedure

Procedure deleteLast (in/out L: List, out P: adr)

kamus

Q: adr

Algoritma

if L.first == NULL then

P = NULL

else if (L.first → next == NULL) then

P = L.first

L.first = NULL

else

P = L.first

Q = L.first

while (P → next != NULL) do

Q = P

P = P → next

endwhile

Q → next = NULL

endif

endprocedure

Procedure deleteAfter (in/out L: List, Q: adr)

Kamus

P: adr

Algoritma

P = Q → next

Q → next = P → next

P → next = NULL

endprocedure

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