School of Computing, Faculty of Engineering

Universiti Teknologi Malaysia (UTM)

Linked List Assignment

DATA STRUCTURE AND ALGORITHM

SUBJECT CODE: SECJ2013-02

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Lab 1

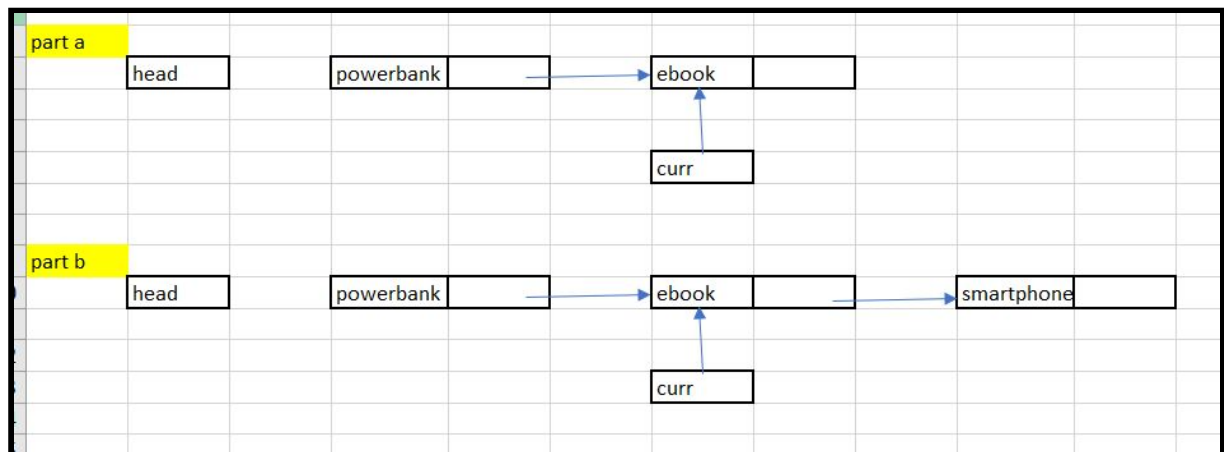**PG 176 Q2**

Please refer to the file *PG176question2.cpp*

PG177 Q2

Please refer to the file *PG177question2.cpp*

PG178 Q3

Please refer to the file *PG178question3.cpp*
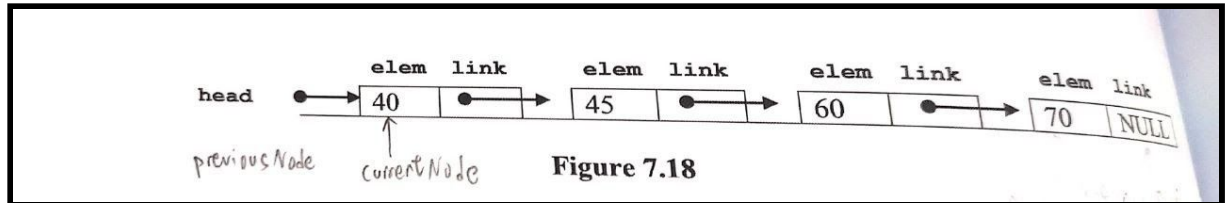
PG178 Q4

PG179 Q4

Please refer to the file *PG179question4.cpp*

    a)   R E A D

    a)   B R E A D

    b) The number of elements in this list is 5

    c) The index(starts with 0) of the largest element in this list is 1
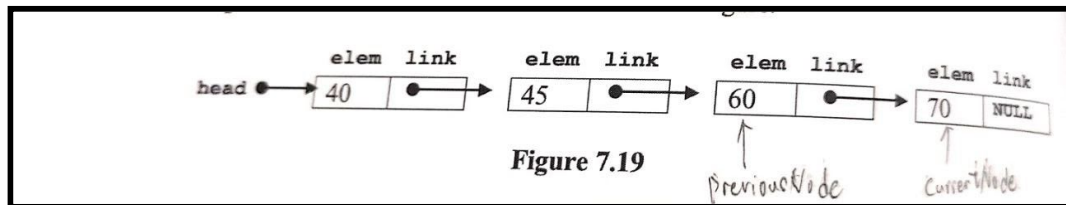
PG180 Q5
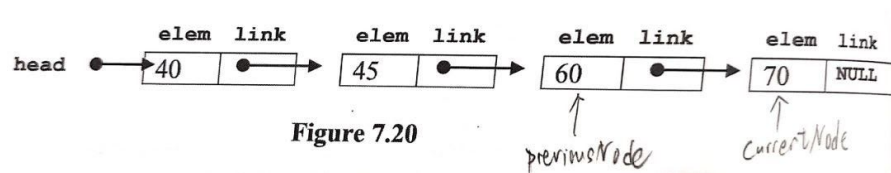
Please refer to the file *PG180question5.cpp*

A.

Figure 7.18

B.

```
Node *newNode = new (Node);
newNode->elem = 35;
```


Figure 7.19

C.

D.

```
newNode->link = head;
head= newNode;
```


Figure 7.20

E.

F.

```
Node *newNode = new (Node);
newNode->elem = 63;


newNode->link = prevNode->link;
prevNode->link = newNode;


previousNode->link = NULL;
delete newNode;
```
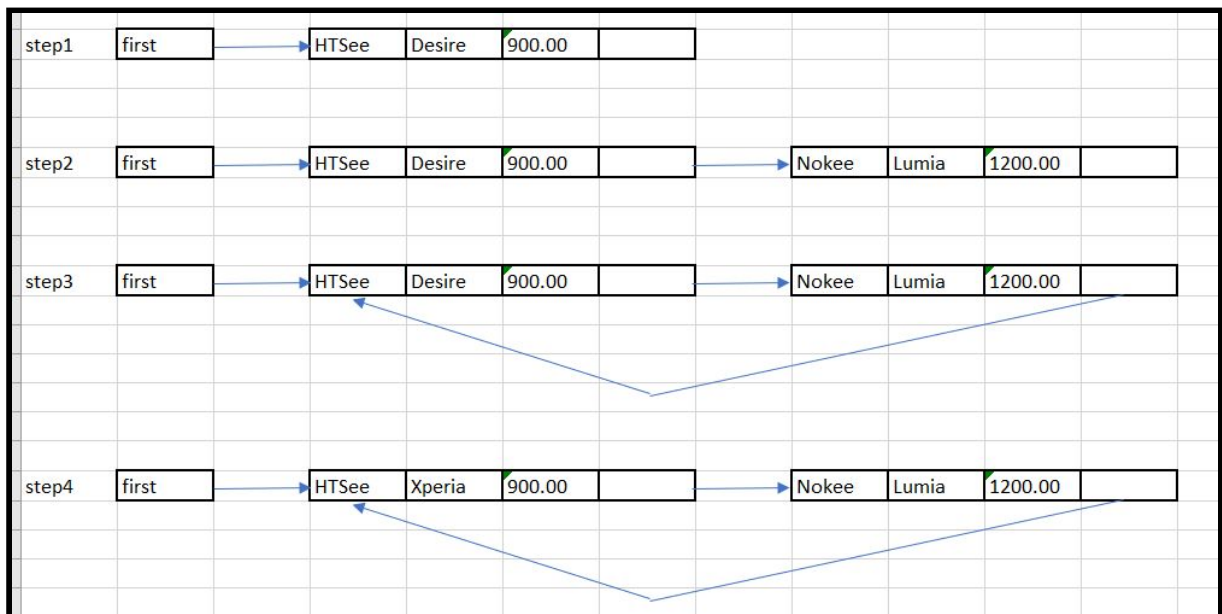
PG181 Q6

Please refer to the file *PG181question6.cpp*

    a)

        nodePhone *ptr1 = new nodePhone("Nokee", "Lumia", 1200.00);

        nodePhone *ptr2 = new nodePhone("HTSee", "Desire", 900.00);

    b)

    c)   first = current->next;

        delete current;

    d) nodePhone* firstNode = first;

        firstNode->next = current->next;

        delete current;

    e) cout << "List of Affordable Smart Phones\n\n";

        nodePhone* currNode = first

        while(currNode != Node){

               cout << fixed << setprecision(2);

               if (currNode->price < 2000.00){

```cpp
            cout << "Brand : " << currNode->brand << endl
                 << "Model: " << currNode->model << endl
                 << "Price : RM" << currNode->price << endl;
                 << "The phone is affordable for student" << endl << endl;
        }
        currNode = currNode->next;
    }
```

Lab 2

PG182 Q1

Please refer to the file *linked_list_01.cpp*

PG183 Q2

Please refer to the file *linked_list_02.cpp*