

# LINKED LIST: LAB 1



CSC248: FUNDAMENTALS OF LINKED LIST

XYMovieApp - lab1

Class Edit Tools Options

CompileUndoCutCopyPasteFind...CloseSource Code

```

/*****
CSC248 - Fundamentals of Data Structures
LinkedList: Lab 1
Question #1
*****/
import java.util.*;


public class XYMovieApp
{
    public static void main(String[] args)
    {
        /*****
        (a) Declare an object of type LinkedList named MovieList. Prompt the users to enter information of FIVE (5)
        movies and store them into the MovieList. Use the for loop control structure for the iteration purposes.
        *****/

        /*****
        (b) Display the contents of MovieList.
        *****/

        /*****
        (c) Display the movie's information where its title begins with character 'A'.
        *****/

        /*****
        (d) Count and display the number of movies where price is less than RM10.
        *****/
    }
}

```



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XYMovieApp - LinkedList

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Source Code

```
*****/
import java.util.*;

public class XYMovieApp
{
    public static void main(String[] args)
    {
        /*****/
        (a) Declare an object of type LinkedList named MovieList. Prompt the users to enter information of FIVE (5)
        movies and store them into the MovieList. Use the for loop control structure for the iteration purposes.
        *****/
        LinkedList MovieList = new LinkedList();
        Scanner sc = new Scanner(System.in);

        for(int counter = 0; counter < 5; counter++)
        {
            System.out.print("Enter the title of the movie: ");
            String title = sc.next();
            System.out.print("Enter the price of the movie: ");
            double price = sc.nextDouble();
            System.out.print("Enter the mode of payment: ");
            String payment = sc.next();
            System.out.print("Enter the membership status: ");
            String member = sc.next();

            XYMovie mv = new XYMovie(title, price, payment, member);
            MovieList.insertAtFront(mv);
            System.out.println();
        }
    }
}
```

XYMovieApp - LinkedList


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Source Code

```
/*  
 (b) Display the contents of MovieList.  
 */  
System.out.println("\n-->Displaying the contents of Movie List: ");  
//step 1: getFirst() & cast  
XYMovie mvl = (XYMovie) MovieList.getFirst();  
//step 2: loop  
while (mvl != null)  
{  
    //step 3: whatever  
    System.out.print(mvl.toString());  
    //step 4: getNext  
    mvl = (XYMovie) MovieList.getNext();  
}
```


/\*\*\*\*\*

(c) Display the movie's information where its title begins with character 'A'. 

\*\*\*\*\*/

System.out.println("\n-->Displaying the details of movies that start with A: ");

//step 1: getFirst() & cast


XYMovie mv2 = (XYMovie) MovieList.getFirst(); 

//step 2: loop

while(mv2 != null)

{

//step 3: whatever

if(mv2.getMovieTitle().charAt(0) == 'A' || mv2.getMovieTitle().charAt(0) == 'a') 

System.out.print(mv2.toString());

//step 4: getNext

mv2 = (XYMovie) MovieList.getNext();

}

```
/******  
(d) Count and display the number of movies where price is less than RM10.  
*****/  
int countMovie = 0;  
//step 1: getFirst() & cast  
XYMovie mv3 = (XYMovie) MovieList.getFirst();  
//step 2: loop  
while(mv3 != null)  
{  
    //step 3: whatever  
    if(mv3.getPrice() < 10)  
        countMovie++;  
  
    //step 4: getNext  
    mv3 = (XYMovie) MovieList.getNext();  
}  
System.out.println("\n-->Number of movies with price less than RM10: " + countMovie);
```

/\*\*\*\*\*

(e) Display the movie's title for those members who paid using debit/credit card.

\*\*\*\*\*/

int no = 0;

System.out.println("\n-->Displaying the movies' title for members paid with card: ");

//step 1: getFirst() & cast

XYMovie mv6 = (XYMovie) MovieList.getFirst();

//step 2: loop

while(mv6 != null)

{

//step 3: whatever

if(mv6.getMembership().equalsIgnoreCase("yes") && mv6.getModePayment().equalsIgnoreCase("card"))

{

no++;

System.out.println(no + " " + mv6.getMovieTitle());

}

//step 4: getNext

mv6 = (XYMovie) MovieList.getNext();

}



1

2

3

4

```
/******/
(f) Copy all movie's details that have been paid with cash into another LinkedList named CashList.
Calculate and display the total of cash collected for the day.
```

```
/******/
LinkedList CashList = new LinkedList();
//step 1: getFirst() & cast
XYMovie mv4= (XYMovie) MovieList.getFirst();
//step 2: loop
while(mv4 != null)
{
    //step 3: whatever
    if(mv4.getModePayment().equalsIgnoreCase("cash"))
        CashList.insertAtBack(mv4);
    //step 4: getNext
    mv4 = (XYMovie) MovieList.getNext();
}
```

```
double totalCash = 0.0;
//step 1: getFirst() & cast
XYMovie mv5= (XYMovie) CashList.getFirst();
//step 2: loop
while(mv5 != null)
{
    //step 3: whatever
    totalCash += mv5.getPrice();
    //step 4: getNext
    mv5 = (XYMovie) CashList.getNext();
}
```

```
System.out.println("\n-->Total cash collection for the day: RM" + totalCash);
```





**THANK YOU**