

Afshan ahmed khan

IT-2k19-03

```

import java.util.*;
import java.util.LinkedList;
import java.util.Queue;

public class queue {
    public static void main(String[] args) {
        Queue obj = new LinkedList();
        Scanner sc = new Scanner(System.in);

        for (int i = 0; i <= 5; i++) {
            System.out.print("Enter elements of queue ");
            obj.add(sc.next());
        }

        System.out.println("enter any integer element you want to remove");
        Object a = sc.next();
        obj.remove(a);
        System.out.println("enter any String element you want to remove");
        String b = sc.next();
        obj.remove(b);
        System.out.println("printing through foreach loop");

        Iterator itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > ls
19 arraydeque deque hashset linkedlist map queue vector
18 arraylist hashmap hashtable list priorityqueue stack
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd queue
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > java queue
15 Enter elements of queue 12
14 Enter elements of queue afshan
13 Enter elements of queue ahmed
12 Enter elements of queue 03
11 Enter elements of queue khan
10 Enter elements of queue 45
9 enter any integer element you want to remove
8 12
7 enter any String element you want to remove
6 afshan
5 printing through foreach loop
4 ahmed
3 03
2 khan
1 45
21 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue >
<~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 21,0-1 All
-- TERMINAL --

```

```

import java.util.*;
import java.util.LinkedList;
import java.util.Queue;

public class queue_foreach {
    public static void main(String[] args) {
        Queue obj = new LinkedList();
        Scanner sc = new Scanner(System.in);

        for (int i = 0; i <= 5; i++) {
            System.out.print("Enter elements of queue ");
            obj.add(sc.nextInt());
        }

        System.out.println("enter any integer element you want to remove");
        int a = sc.nextInt();
        obj.remove(a);
        System.out.println("enter any String element you want to remove");
        String b = sc.next();
        obj.remove(b);

        System.out.println("printing through foreach loop");
        for (Object i : obj) {
            System.out.println(i);
        }
    }
}

```

```

nvim
2 q/queue.java t:/~/S/a/j/1/b/zsh
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > javac queue_foreach.java -Xlint:unchecked
14 d && java queue
13 queue_foreach.java:12: warning: [unchecked] unchecked call to add(E) as a member of the raw type Queue
12 |         obj.add(sc.nextInt());
11 |         ^
10 | where E is a type-variable:
9 |   E extends Object declared in interface Queue
8 | 1 warning
7 Enter elements of queue 12
6 Enter elements of queue afshan
5 Enter elements of queue ahmed
4 Enter elements of queue 87
3 Enter elements of queue khan
2 Enter elements of queue 21
1 enter any integer element you want to remove
49 21
1 enter any String element you want to remove
2 khan
3 printing through foreach loop
4 12
5 afshan
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 49,1 91%

```

```

import java.util.Iterator;
import java.util.LinkedList;
import java.util.Queue;

public class queue_generic {

    public static void main(String[] args) {
        Queue<Integer> q = new LinkedList<>();

        for (int i = 0; i < 5; i++)
            q.add(i);

        int removedele = q.remove();
        System.out.println("removed element-"
            + removedele);

        int head = q.peek();
        System.out.println("head of queue-"
            + head);

        int size = q.size();
        System.out.println("Size of queue-"
            + size);

        System.out.println("Traversing through iterators");
        Iterator itr = q.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t://~/S/a/j//1/b/zsh
17 printing through foreach loop
16 12
15 afshan
14 ahmed
13 87
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > ls
11 queue.class queue_foreach.java queue_generic_foreach.class queue_generic.java
10 queue_foreach.class queue_generic.class queue_generic_foreach.java queue.java
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > java queue_generic
8 removed element-0
7 head of queue-1
6 Size of queue-4
5 Traversing through iterators
4 1
3 2
2 3
1 4
69 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 69,64 Bot

```

```

import java.util.LinkedList;
import java.util.Queue;

public class queue_generic_foreach {

    public static void main(String[] args) {
        Queue<Integer> q = new LinkedList<>();

        for (int i = 0; i < 5; i++)
            q.add(i);

        int removedele = q.remove();
        System.out.println("removed element-"
            + removedele);

        int head = q.peek();
        System.out.println("head of queue-"
            + head);

        int size = q.size();
        System.out.println("Size of queue-"
            + size);

        System.out.println("print through foreach loop");
        for (Integer i : q) {
            System.out.println(i);
        }
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 queue.class queue_foreach.java queue_generic_foreach.class queue_generic.java
19 queue_foreach.class queue_generic.class queue_generic_foreach.java queue.java
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > java queue_generic
17 removed element-0
16 head of queue-1
15 Size of queue-4
14 Traversing through iterators
13 1
12 2
11 3
10 4
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > java queue_generic_foreach
8 removed element-0
7 head of queue-1
6 Size of queue-4
5 print through foreach loop
4 1
3 2
2 3
1 4
78 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue >
term: ~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 78,0-1 Bot
-- TERMINAL --

```

```

import java.util.Arrays;
import java.util.Iterator;

public class array {
    public static void main(String args[]){
        Object[] myArray = {897,"afshan", 56, 78, 90, "ahmed", 12, 123,"khan", 75};
        Iterator iterator = Arrays.stream(myArray).iterator();
        while(iterator.hasNext()) {
            System.out.println(iterator.next());
        }
    }
}

```

```

nvim
2 q/queue.java t//~/.S/a/j//1/b/zsh
20 Size of queue-4
19 print through foreach loop
18 1
17 2
16 3
15 4
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > cd ..
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd array
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > javac *.java -Xlint:unchecked
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array
10 897
9 afshan
8 56
7 78
6 90
5 ahmed
4 12
3 123
2 khan
1 75
92 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 92,0-1 Bot
-- TERMINAL --

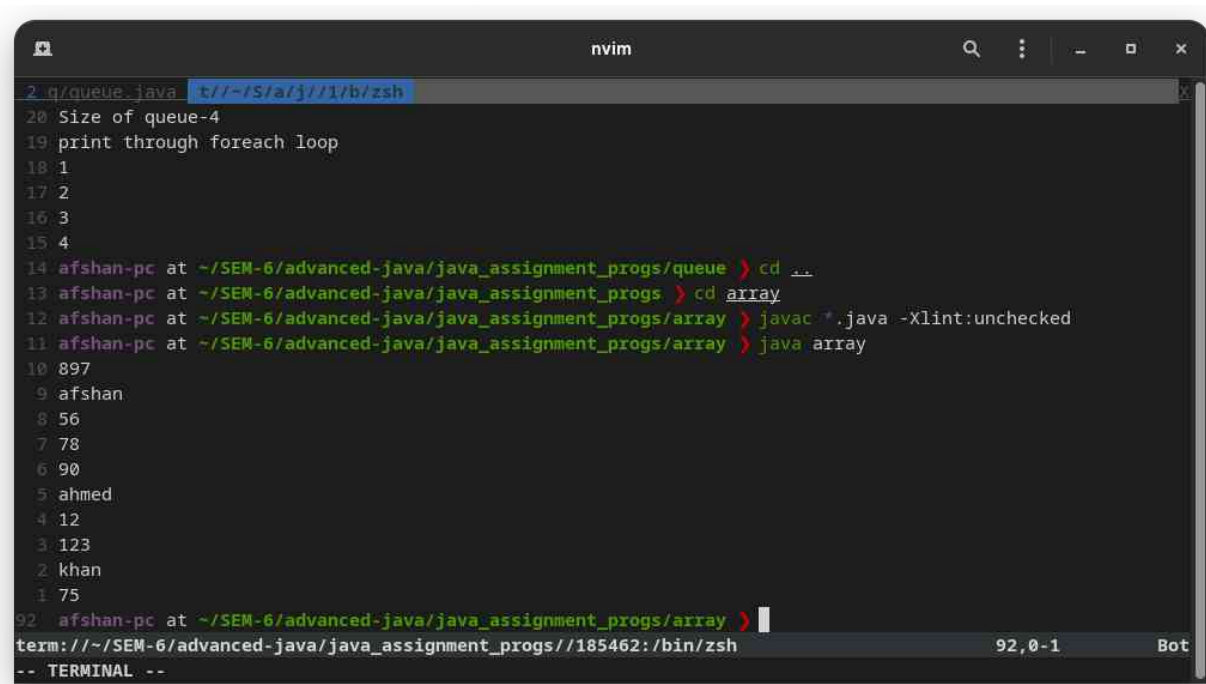
```

```

import java.util.Arrays;
import java.util.Iterator;

public class array_foreach {
    public static void main(String args[]){
        Object[] myArray = {897,"afshan", 56, 78, 90, "ahmed", 12, 123,"khan", 75};
        for (Object o : myArray) {
            System.out.println(o);
        }
    }
}

```



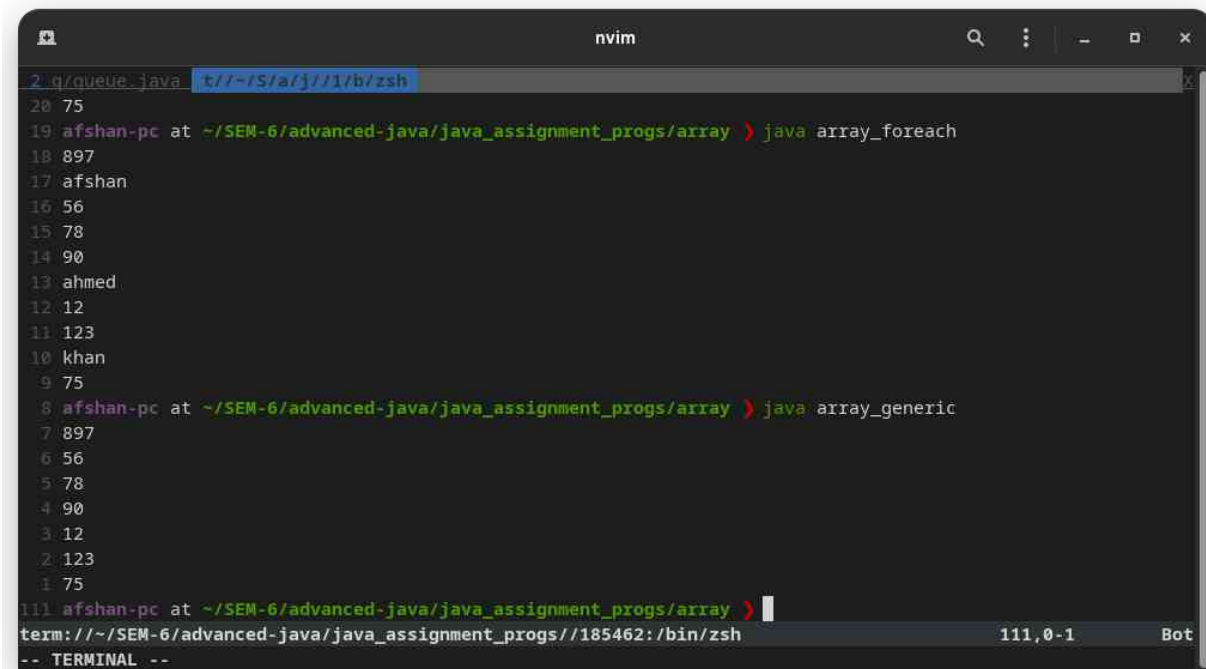
```

nvim
2 q/queue.java t://S/a/j//1/b/zsh
20 Size of queue-4
19 print through foreach loop
18 1
17 2
16 3
15 4
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/queue > cd ..
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd array
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > javac *.java -Xlint:unchecked
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array
10 897
9 afshan
8 56
7 78
6 90
5 ahmed
4 12
3 123
2 khan
1 75
92 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 92,0-1 Bot
-- TERMINAL --

```

```
import java.util.Arrays;
import java.util.Iterator;

public class array_generic {
    public static void main(String args[]){
        Integer[] myArray = {897, 56, 78, 90, 12, 123, 75};
        Iterator<Integer> iterator = Arrays.stream(myArray).iterator();
        while(iterator.hasNext()) {
            System.out.println(iterator.next());
        }
    }
}
```



The screenshot shows a terminal window with a dark background. The title bar at the top reads 'nvim'. The terminal content shows a list of numbers (75, 897, 56, 78, 90, 12, 123, 75) being printed. Below this, the command 'java array\_generic' is executed, and the same list of numbers is printed again. The terminal prompt is 'afshan-pc at ~/SEM-6/advanced-java/java\_assignment\_progs/array >'. The bottom status bar shows 'term://~/SEM-6/advanced-java/java\_assignment\_progs//185462:/bin/zsh', '111,0-1', and 'Bot'.

```
2 q/queue.java t/~/.S/a/j//1/b/zsh
20 75
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_foreach
18 897
17 afshan
16 56
15 78
14 90
13 ahmed
12 12
11 123
10 khan
9 75
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_generic
7 897
6 56
5 78
4 90
3 12
2 123
1 75
111 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 111,0-1 Bot
-- TERMINAL --
```

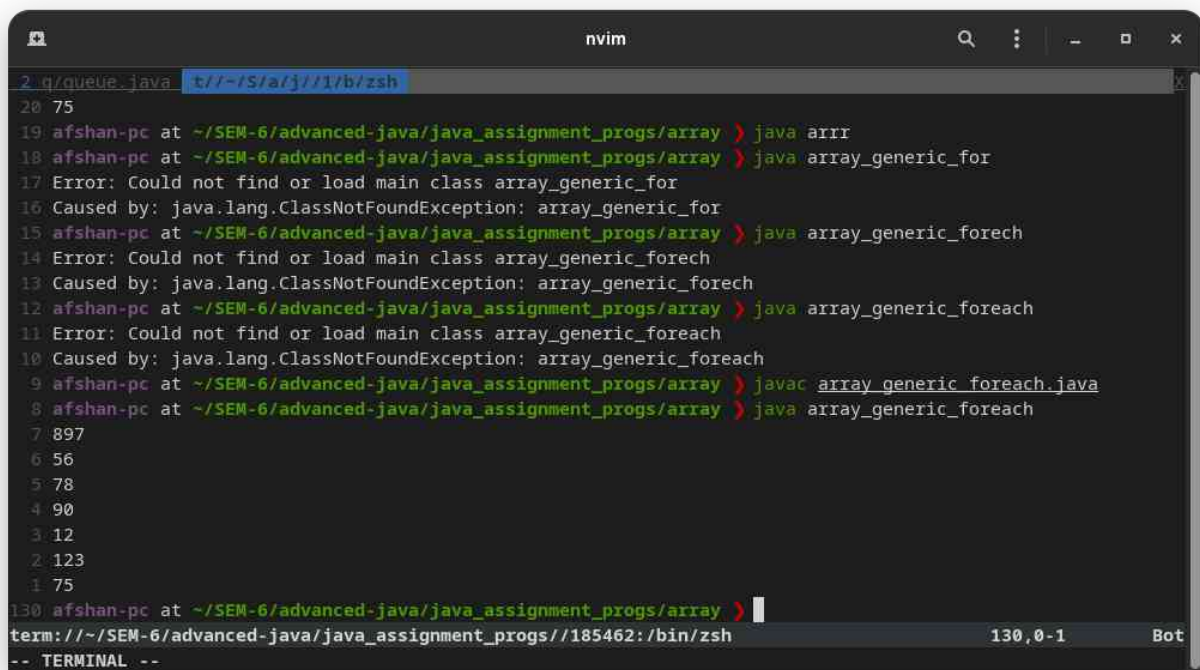


```

import java.util.Arrays;
import java.util.Iterator;

public class array_generic_foreach {
    public static void main(String args[]){
        Integer[] myArray = {897, 56, 78, 90, 12, 123, 75};
        for (Integer i : myArray) {
            System.out.println(i);
        }
    }
}

```



```

nvim
2 q/queue.java t//~/.S/a/j//1/b/zsh
20 75
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java arrr
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_generic_for
17 Error: Could not find or load main class array_generic_for
16 Caused by: java.lang.ClassNotFoundException: array_generic_for
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_generic_foreach
14 Error: Could not find or load main class array_generic_foreach
13 Caused by: java.lang.ClassNotFoundException: array_generic_foreach
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_generic_foreach
11 Error: Could not find or load main class array_generic_foreach
10 Caused by: java.lang.ClassNotFoundException: array_generic_foreach
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > javac array_generic_foreach.java
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array > java array_generic_foreach
7 897
6 56
5 78
4 90
3 12
2 123
1 75
130 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/array >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 130,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

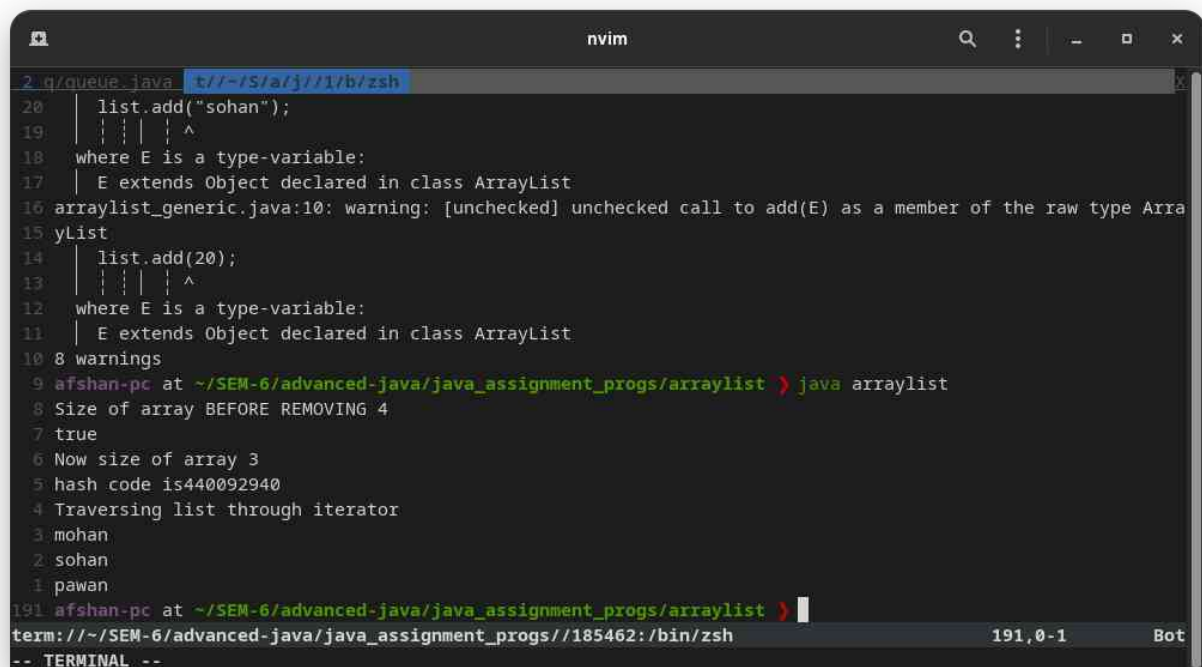
class arraylist {
    public static void main(String args[]) {
        ArrayList<String> list = new ArrayList<String>();// Creating arraylist
        list.add("rohan"); // Adding object in arraylist
        list.add("mohan");
        list.add("sohan");
        list.add("pawan");
        System.out.println("Size of array BEFORE REMOVING " + list.size());

        System.out.println(list.remove("rohan"));
        // Traversing list through Iterator
        Iterator itr = list.iterator();
        System.out.println("Now size of array " + list.size());

        System.out.println("hash code is" + list.hashCode());

        System.out.println("Traversing list through iterator");
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java t://S/a/j//1/b/zsh
20 | list.add("sohan");
19 | | | | ^
18 | where E is a type-variable:
17 | | E extends Object declared in class ArrayList
16 | arraylist_generic.java:10: warning: [unchecked] unchecked call to add(E) as a member of the raw type Arra
15 | yList
14 | list.add(20);
13 | | | | ^
12 | where E is a type-variable:
11 | | E extends Object declared in class ArrayList
10 | 8 warnings
9 | afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist
8 | Size of array BEFORE REMOVING 4
7 | true
6 | Now size of array 3
5 | hash code is440092940
4 | Traversing list through iterator
3 | mohan
2 | sohan
1 | pawan
191 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 191,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class arraylist_generic {
    public static void main(String args[]) {
        ArrayList list = new ArrayList();

        list.add("rohan");
        list.add("mohan");
        list.add("sohan");
        list.add(20);

        // Traversing list through Iterator
        System.out.println("Traversing list through Iterator");
        Iterator itr = list.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

2 q/queue.java b://~/.S/a/j/1/b/zsh
20 | list.add(20);
19 | | | | ^
18 | where E is a type-variable:
17 | | E extends Object declared in class ArrayList
16 | 8 warnings
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist
14 Size of array BEFORE REMOVING 4
13 true
12 Now size of array 3
11 hash code is440092940
10 Traversing list through iterator
9 mohan
8 sohan
7 pawan
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist_generic
5 Traversing list through Iterator
4 rohan
3 mohan
2 sohan
1 20
197 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 197,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

class arraylist_generic_foreach {
    public static void main(String args[]) {
        ArrayList list = new ArrayList();

        list.add("rohan");
        list.add("mohan");
        list.add("sohan");
        list.add(20);

        System.out.println("Traversing list through foreach loop");
        // Traversing list through foreach loop
        for (Object str : list)
            System.out.println(str);
        System.out.println("The clone of list is " + list.clone());
        System.out.println("is this list empty T/F :- " + list.isEmpty());
        System.out.println("The size of the list is " + list.size());
    }
}

```

```

nvim
2 q/queue.java t//~/S/a/j/1/b/zsh
20 hash code is440092940
19 Traversing list through iterator
18 mohan
17 sohan
16 pawan
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist_generic
14 Traversing list through Iterator
13 rohan
12 mohan
11 sohan
10 20
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist_generic_foreach
8 Traversing list through foreach loop
7 rohan
6 mohan
5 sohan
4 20
3 The clone of list is [rohan, mohan, sohan, 20]
2 is this list empty T/F :- false
1 The size of the list is 4
206 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 206,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;
class arraylist_foreach {
    public static void main(String[] args) {
        List<Integer> obj = new ArrayList<Integer>();
        obj.add(152);
        obj.add(343);
        obj.add(139);
        obj.add(123);
        obj.add(358);

        System.out.println("Traversing list through foreach loop");
        for (Integer str : obj) {
            System.out.println(str);
        }
        Collections.sort(obj);
        System.out.println("the assending order is" + obj);
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 mohan
19 sohan
18 20
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist_generic_foreach
16 Travering list through foreach loop
15 rohan
14 mohan
13 sohan
12 20
11 The clone of list is [rohan, mohan, sohan, 20]
10 is this list empty T/F :- false
9 The size of the list is 4
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > java arraylist_foreach
7 Traversing list through foreach loop
6 152
5 343
4 139
3 123
2 358
1 the assending order is[123, 139, 152, 343, 358]
214 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 214,0-1 Bot
-- TERMINAL --

```

```

import java.util.ArrayDeque;
import java.util.Deque;
import java.util.Iterator;
import java.lang.Object;

public class deque {
    public static void main(String[] args) {
        // Creating Deque and adding elements
        Deque<String> obj = new ArrayDeque<String>();
        obj.add("Rohan");
        obj.add("Mohan");
        obj.add("Rohan");
        obj.add("Ajay");
        obj.add("Mohan");

        System.out.println(obj);
        System.out.println("elements contain Rohan ? " + obj.contains("Rohan"));
        System.out.println("removing last Mohan" + obj.removeLastOccurrence("Mohan"));
        System.out.println(obj);
        System.out.println("after removing Rohan");
        obj.removeFirstOccurrence("Rohan");
        System.out.println(obj);
        obj.addFirst("first element");
        obj.addLast("last element");

        System.out.println("Traversing elements through iterator");
        Iterator itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 358
19 the ascending order is[123, 139, 152, 343, 358]
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraylist > cd ..
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd deque
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque
15 Error: Could not find or load main class deque
14 Caused by: java.lang.ClassNotFoundException: deque
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque
12 [Rohan, Mohan, Rohan, Ajay, Mohan]
11 elements contain Rohan ? true
10 removing last Mohantrue
9 [Rohan, Mohan, Rohan, Ajay]
8 after removing Rohan
7 [Mohan, Rohan, Ajay]
6 Traversing elements through iterator
5 first element
4 Mohan
3 Rohan
2 Ajay
1 last element
232 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 232,0-1 Bot
-- TERMINAL --

```

```

import java.util.ArrayDeque;
import java.util.Deque;

public class deque_foreach {
    public static void main(String[] args) {

        Deque<Integer> deq = new ArrayDeque<>();
        deq.offer(5);
        deq.offer(6);
        deq.add(7);
        deq.offerFirst(1);

        for (int i : deq) {
            System.out.println(i);
        }

        deq.poll();
        System.out.println("after using poll " + deq);
        deq.pollFirst();
        System.out.println("after using poll first " + deq);
        deq.pollLast();
        System.out.println("after using polllast " + deq);
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 [Rohan, Mohan, Rohan, Ajay, Mohan]
19 elements contain Rohan ? true
18 removing last Mohantrue
17 [Rohan, Mohan, Rohan, Ajay]
16 after removing Rohan
15 [Mohan, Rohan, Ajay]
14 Traversing elements through iterator
13 first element
12 Mohan
11 Rohan
10 Ajay
9 last element
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_foreach
7 1
6 5
5 6
4 7
3 after using poll [5, 6, 7]
2 after using poll first [6, 7]
1 after using polllast [6]
240 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque >
term: //~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 240,0-1 Bot
-- TERMINAL --

```



```

import java.util.LinkedList;
import java.util.Deque;
import java.util.Iterator;

public class deque_generic {
    public static void main(String[] args) {
        Deque obj = new LinkedList();
        for (int i = 0; i <= 5; i++) {
            int a = i * 3;
            obj.add(a);
        }
        obj.add("afshan");

        System.out.println("The queue is: " + obj);
        int num1 = (int)obj.removeFirst();
        System.out.println("The element deleted from the head is: " + num1);
        System.out.println("The queue after deletion is: " + obj);

        int head = (int)obj.peek();
        System.out.println("The head of the queue is: " + head);

        System.out.println("Traversing through iterator");
        Iterator itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t://S/a/j//1/b/zsh
afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_foreach
19 1
18 5
17 6
16 7
15 after using poll [5, 6, 7]
14 after using poll first [6, 7]
13 after using polllast [6]
afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_generic
11 The queue is: [0, 3, 6, 9, 12, 15, afshan]
10 The element deleted from the head is: 0
9 The queue after deletion is: [3, 6, 9, 12, 15, afshan]
8 The head of the queue is: 3
7 Traversing through iterator
6 3
5 6
4 9
3 12
2 15
1 afshan
252 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 252,0-1 Bot
-- TERMINAL --

```



```

import java.util.LinkedList;
import java.util.Deque;

public class deque_generic_foreach {
    public static void main(String[] args) {
        Deque obj = new LinkedList();
        for (int i = 0; i <= 5; i++) {
            int a = i * 3;
            obj.add(a);
        }
        obj.add("afshan");

        System.out.println("The queue is: " + obj);
        int num1 = (int)obj.removeFirst();
        System.out.println("The element deleted from the head is: " + num1);
        System.out.println("The queue after deletion is: " + obj);

        int head = (int)obj.peek();
        System.out.println("The head of the queue is: " + head);

        System.out.println("Traversing through foreach");
        for (Object o : obj) {
            System.out.println(o);
        }
    }
}

```

```

nvim
2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/deque
20 The head of the queue is: 3
19 Traversing through iterator
18 3
17 6
16 9
15 12
14 15
13 afshan
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_generic_foreach
11 The queue is: [0, 3, 6, 9, 12, 15, afshan]
10 The element deleted from the head is: 0
9 The queue after deletion is: [3, 6, 9, 12, 15, afshan]
8 The head of the queue is: 3
7 Traversing through foreach
6 3
5 6
4 9
3 12
2 15
1 afshan
264 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 264,0-1 Bot
-- TERMINAL --

```

```

}

```

```

import java.util.*;

public class arraydeque {
    public static void main(String[] args) {
        ArrayDeque<String> obj = new ArrayDeque<String>();
        obj.add("rohan");
        obj.add("mohan");
        obj.add("sohan");
        // Traversing elements
        System.out.println("Traversing through the iterator");
        Iterator<String> itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

The screenshot shows a terminal window with the following output:

```

2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_generic_foreach
20 afshan
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > java deque_generic_foreach
18 The queue is: [0, 3, 6, 9, 12, 15, afshan]
17 The element deleted from the head is: 0
16 The queue after deletion is: [3, 6, 9, 12, 15, afshan]
15 The head of the queue is: 3
14 Traversing through foreach
13 3
12 6
11 9
10 12
9 15
8 afshan
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > cd ..
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd arraydeque
5 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque
4 Traversing through the iterator
3 rohan
2 mohan
1 sohan
271 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 271,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class arraydeque_foreach {
    public static void main(String[] args) {
        ArrayDeque<String> obj = new ArrayDeque<String>();
        obj.add("rohan");
        obj.add("mohan");
        obj.add("sohan");
        // Traversing elements

        System.out.println("Traversing through the for each loop");
        for (String str : obj) {
            System.out.println(str);
        }
    }
}

```

```

nvim
2 q/queue.java t//~/.S/a/j//1/b/zsh
5 The head of the queue is: 3
4 Traversing through foreach
3 3
2 6
1 9
261 12
1 15
2 afshan
3 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > cd ..
4 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd arraydeque
5 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque
6 Traversing through the iterator
7 rohan
8 mohan
9 sohan
10 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_foreach
11 Traversing through the for each loop
12 rohan
13 mohan
14 sohan
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 261,2 Bot

```

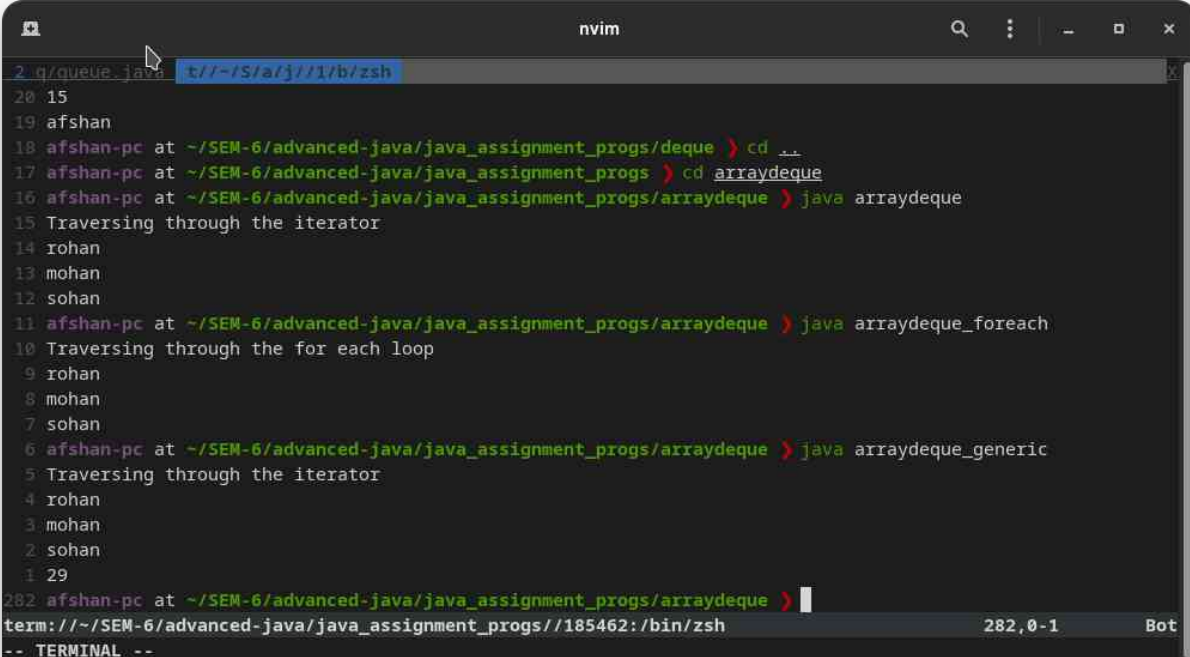
```

import java.util.*;

public class arraydeque_generic {
    public static void main(String[] args) {
        ArrayDeque obj = new ArrayDeque ();
        obj.add("rohan");
        obj.add("mohan");
        obj.add("sohan");
        obj.add(29);

        // Traversing elements
        System.out.println("Traversing through the iterator");
        Iterator<Object> itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 15
19 afshan
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/deque > cd ..
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd arraydeque
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque
15 Traversing through the iterator
14 rohan
13 mohan
12 sohan
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_foreach
10 Traversing through the for each loop
9 rohan
8 mohan
7 sohan
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_generic
5 Traversing through the iterator
4 rohan
3 mohan
2 sohan
1 29
282 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 282,0-1 Bot
-- TERMINAL --

```

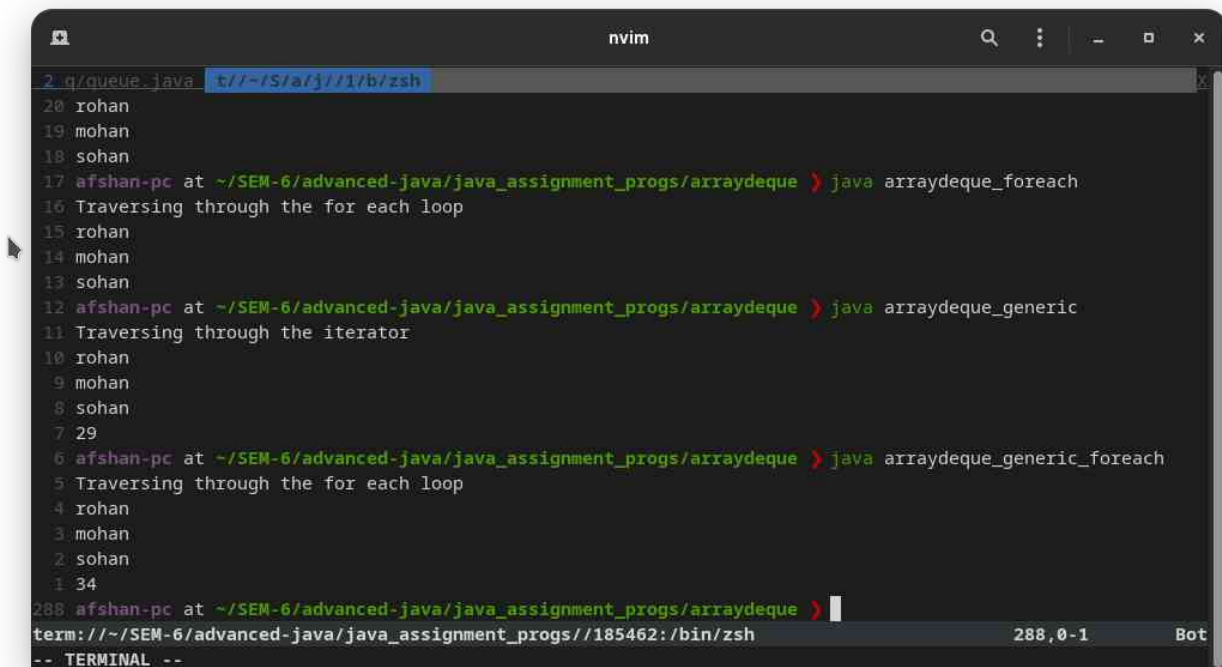
```

import java.util.*;

public class arraydeque_generic_foreach {
    public static void main(String[] args) {
        ArrayDeque obj = new ArrayDeque();
        obj.add("rohan");
        obj.add("mohan");
        obj.add("sohan");
        obj.add(34);

        // Traversing elements
        System.out.println("Traversing through the for each loop");
        for (Object o : obj) {
            System.out.println(o);
        }
    }
}

```



```

nvim
2 q/queue.java t//~/.S/a/tj//1/b/zsh
20 rohan
19 mohan
18 sohan
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_foreach
16 Traversing through the for each loop
15 rohan
14 mohan
13 sohan
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_generic
11 Traversing through the iterator
10 rohan
9 mohan
8 sohan
7 29
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque > java arraydeque_generic_foreach
5 Traversing through the for each loop
4 rohan
3 mohan
2 sohan
1 34
288 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/arraydeque >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 288,0-1 Bot
-- TERMINAL --

```

```

import java.util.Iterator;
import java.util.PriorityQueue;

class priorityqueue {
    public static void main(String[] args) {

        // Creating a priority queue
        PriorityQueue numbers = new PriorityQueue();

        // Using the add() method
        numbers.add(4);
        numbers.add(2);
        numbers.add("ten");
        numbers.add("seven");

        // Using the offer() method
        numbers.offer(1);
        System.out.println("Updated PriorityQueue: " + numbers);

        Iterator itr = numbers.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 where E is a type-variable:
19 | E extends Object declared in class PriorityQueue
18 priorityqueue.java:12: warning: [unchecked] unchecked call to add(E) as a member of the raw type Priority
17 Queue
16 | | | numbers.add(2);
15 | | | | | | | ^
14 | where E is a type-variable:
13 | E extends Object declared in class PriorityQueue
12 priorityqueue.java:16: warning: [unchecked] unchecked call to offer(E) as a member of the raw type Priori
11 tyQueue
10 | | | numbers.offer(1);
9 | | | | | | | ^
8 | where E is a type-variable:
7 | E extends Object declared in class PriorityQueue
6 3 warnings
5 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue
4 Updated PriorityQueue: [1, 4, 2]
3 1
2 4
1 2
408 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 408,0-1 Bot
-- TERMINAL --

```

```

import java.util.PriorityQueue;

public class priorityqueue_foreach {
    public static void main(String[] args) {

        // Creating a priority queue
        PriorityQueue numbers = new PriorityQueue();

        // Using the add() method
        numbers.add(4);
        numbers.add(2);
        numbers.add("ten");
        numbers.add("seven");

        // Using the offer() method
        numbers.offer(1);
        System.out.println("Updated PriorityQueue: " + numbers);

        for (Object o : numbers ) {
            System.out.println(o);
        }
    }
}

```

The screenshot shows the nvim editor interface. The top status bar indicates the file is 'q/queue.java' and the terminal is running 't//~/SEM-6/advanced-java/java\_assignment\_progs/priorityqueue'. The editor displays the Java code from the previous block, with warnings for unchecked calls to 'add(E)' and 'offer(E)'. The terminal output shows the execution of 'java priorityqueue\_foreach', resulting in the output: 'Updated PriorityQueue: [1, 4, 2]' followed by the elements of the queue: '1', '4', and '2' on separate lines. The bottom status bar shows the cursor is at line 439, column 23, and the terminal is running 'term://~/SEM-6/advanced-java/java\_assignment\_progs//185462:/bin/zsh'.

```

2 q/queue.java t//~/SEM-6/advanced-java/java_assignment_progs/priorityqueue
4 where E is a type-variable:
3 | E extends Object declared in class PriorityQueue
2 priorityqueue_foreach.java:11: warning: [unchecked] unchecked call to add(E) as a member of the raw type
1 PriorityQueue
439 | | | | | numbers.add(2);
1 | | | | | | | | | | ^
2 | | | | | | | | | | where E is a type-variable:
3 | | | | | | | | | | E extends Object declared in class PriorityQueue
4 priorityqueue_foreach.java:14: warning: [unchecked] unchecked call to offer(E) as a member of the raw typ
5 e PriorityQueue
6 | | | | | numbers.offer(1);
7 | | | | | | | | | | ^
8 | | | | | | | | | | where E is a type-variable:
9 | | | | | | | | | | E extends Object declared in class PriorityQueue
10 3 warnings
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_foreach
12 Updated PriorityQueue: [1, 4, 2]
13 1
14 4
15 2
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 439,23 Bot

```

```

import java.util.Iterator;
import java.util.PriorityQueue;

class priorityqueue_generic_foreach{
    public static void main(String[] args) {

        // Creating a priority queue
        PriorityQueue<Integer> numbers = new PriorityQueue<>();

        // Using the add() method
        numbers.add(4);
        numbers.add(2);
        System.out.println("PriorityQueue: " + numbers);

        // Using the offer() method
        numbers.offer(1);
        System.out.println("Updated PriorityQueue: " + numbers);

        for (int i : numbers) {
            System.out.println(i);
        }
    }
}

```

```

2 q/queue.java t:/~/S/a/j/1/b/zsh
6 | E extends Object declared in class PriorityQueue
5 priorityqueue_foreach.java:14: warning: [unchecked] unchecked call to offer(E) as a member of the raw typ
4 e PriorityQueue
3 | | | numbers.offer(1);
2 | | | | | | | | | ^
1 | where E is a type-variable:
448 | E extends Object declared in class PriorityQueue
1 3 warnings
2 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_foreach
3 Updated PriorityQueue: [1, 4, 2]
4 1
5 4
6 2
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_generic_forea
8 ch
9 PriorityQueue: [2, 4]
10 Updated PriorityQueue: [1, 4, 2]
11 1
12 4
13 2
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 448,51 Bot

```



```

import java.util.Iterator;
import java.util.PriorityQueue;

class priorityqueue_generic {
    public static void main(String[] args) {

        // Creating a priority queue
        PriorityQueue<Integer> numbers = new PriorityQueue<>();

        // Using the add() method
        numbers.add(4);
        numbers.add(2);
        numbers.add(5);

        // Using the offer() method
        numbers.offer(1);
        System.out.println("Updated PriorityQueue: " + numbers);

        Iterator<Integer> itr = numbers.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t://~/.S/a/j/1/b/zsh
20 | E extends Object declared in class PriorityQueue
19: 3 warnings
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_foreach
17 Updated PriorityQueue: [1, 4, 2]
16: 1
15: 4
14: 2
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_generic_forea
12 ch
11 PriorityQueue: [2, 4]
10 Updated PriorityQueue: [1, 4, 2]
9: 1
8: 4
7: 2
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue > java priorityqueue_generic
5 Updated PriorityQueue: [1, 2, 5, 4]
4: 1
3: 2
2: 5
1: 4
468 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/priorityqueue >
term: //~/.SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 468,0-1 Bot
-- TERMINAL --

```

```

import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class hashmap {
    public static void main(String[] args) {
        HashMap<Integer,Character> alphabets = new HashMap<>();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        //...

        Set<Entry<Integer,Character>> alphabets_entry = alphabets.entrySet();
        Iterator<Entry<Integer,Character>> itr = alphabets_entry.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t:/~/S/a/j/1/b/zsh
5 Map
4 | alphabets.put('E', "vowels");
3 | | | | | | | ^
2 | where K,V are type-variables:
1 | | K extends Object declared in class HashMap
579 | | V extends Object declared in class HashMap
1 | hashmap_generic.java:17: warning: [unchecked] unchecked call to put(K,V) as a member of the raw type Hash
2 | Map
3 | | alphabets.put('I', "vowels");
4 | | | | | | | ^
5 | | where K,V are type-variables:
6 | | | K extends Object declared in class HashMap
7 | | | V extends Object declared in class HashMap
8 | 16 warnings
9 | afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap
10 | 1=A
11 | 2=B
12 | 3=C
13 | 4=D
14 | 5=E
15 | afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 579,21 Bot

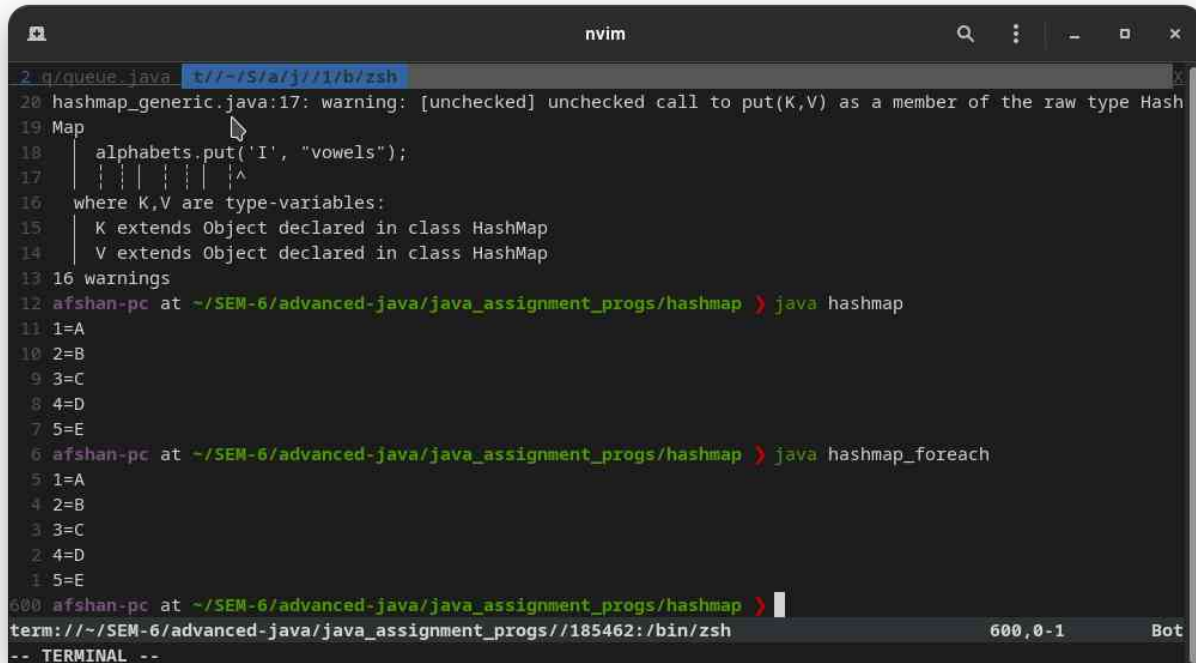
```

```
import java.util.HashMap;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;
```

```
public class hashmap_foreach {
    public static void main(String[] args) {
        HashMap<Integer,Character> alphabets = new HashMap<>();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        //...
```

```
        Set<Entry<Integer,Character>> alphabets_entry = alphabets.entrySet();
```

```
        for (Entry e : alphabets_entry ) {
            System.out.println(e);
        }
    }
}
```



The screenshot shows a terminal window with the following content:

```
nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 hashmap_generic.java:17: warning: [unchecked] unchecked call to put(K,V) as a member of the raw type Hash
19: Map
18 | alphabets.put('I', "vowels");
17 | | | | | ^
16 | where K,V are type-variables:
15 | K extends Object declared in class HashMap
14 | V extends Object declared in class HashMap
13 16 warnings
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap
11 1=A
10 2=B
9 3=C
8 4=D
7 5=E
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap_foreach
5 1=A
4 2=B
3 3=C
2 4=D
1 5=E
600 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 600,0-1 Bot
-- TERMINAL --
```

```

import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class hashmap_generic {
    public static void main(String[] args) {
        HashMap alphabets = new HashMap();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        alphabets.put('A', "vowels");
        alphabets.put('E', "vowels");
        alphabets.put('I', "vowels");

        Set alphabets_entry = alphabets.entrySet();
        Iterator itr = alphabets_entry.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/~/b/zsh
20 1=A
19 2=B
18 3=C
17 4=D
16 5=E
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap_foreach
14 1=A
13 2=B
12 3=C
11 4=D
10 5=E
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap_generic
8 1=A
7 A=vowels
6 2=B
5 3=C
4 4=D
3 5=E
2 E=vowels
1 I=vowels
609 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 609,0-1 Bot
-- TERMINAL --

```

```

import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class hashmap_generic_foreach {
    public static void main(String[] args) {
        HashMap alphabets = new HashMap();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        alphabets.put('A', "vowels");
        alphabets.put('E', "vowels");
        alphabets.put('I', "vowels");

        //...

        Set alphabets_entry = alphabets.entrySet();
        for (Object o : alphabets_entry) {
            System.out.println(o);
        }
    }
}

```

```

nvim
t://-/S/a/j/1/b/zsh
2 q/queue.java
20 4=D
19 5=E
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap_generic
17 1=A
16 A=vowels
15 2=B
14 3=C
13 4=D
12 5=E
11 E=vowels
10 I=vowels
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > java hashmap_generic_foreach
8 1=A
7 A=vowels
6 2=B
5 3=C
4 4=D
3 5=E
2 E=vowels
1 I=vowels
618 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 618,0-1 Bot
-- TERMINAL --

```

```

import java.util.Hashtable;
import java.util.Iterator;
import java.util.Set;
import java.util.Map.Entry;

public class hashtable {
    public static void main(String[] args) {
        Hashtable<Integer,String> studentsList = new Hashtable<>();
        studentsList.put(1,"afshan");
        studentsList.put(2,"rahul");
        studentsList.put(3,"vinayak");
        studentsList.put(4, "xersex");

        Set<Entry<Integer,String>> entryset = studentsList.entrySet();
        Iterator<Entry<Integer,String>> itr = entryset.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 1=A
19 A=vowels
18 2=B
17 3=C
16 4=D
15 5=E
14 E=vowels
13 I=vowels
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashmap > cd ..
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd hashtable
10 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > ls
 9 hashtable.class      hashtable_generic.class      hashtable_generic.java
 8 hashtable_foreach.class hashtable_generic_foreach.class hashtable.java
 7 hashtable_foreach.java hashtable_generic_foreach.java
 6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic_foreach
 5 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable
 4 4=xersex
 3 3=vinayak
 2 2=rahul
 1 1=afshan
630 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable >
term: ~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 630,0-1 Bot
-- TERMINAL --

```

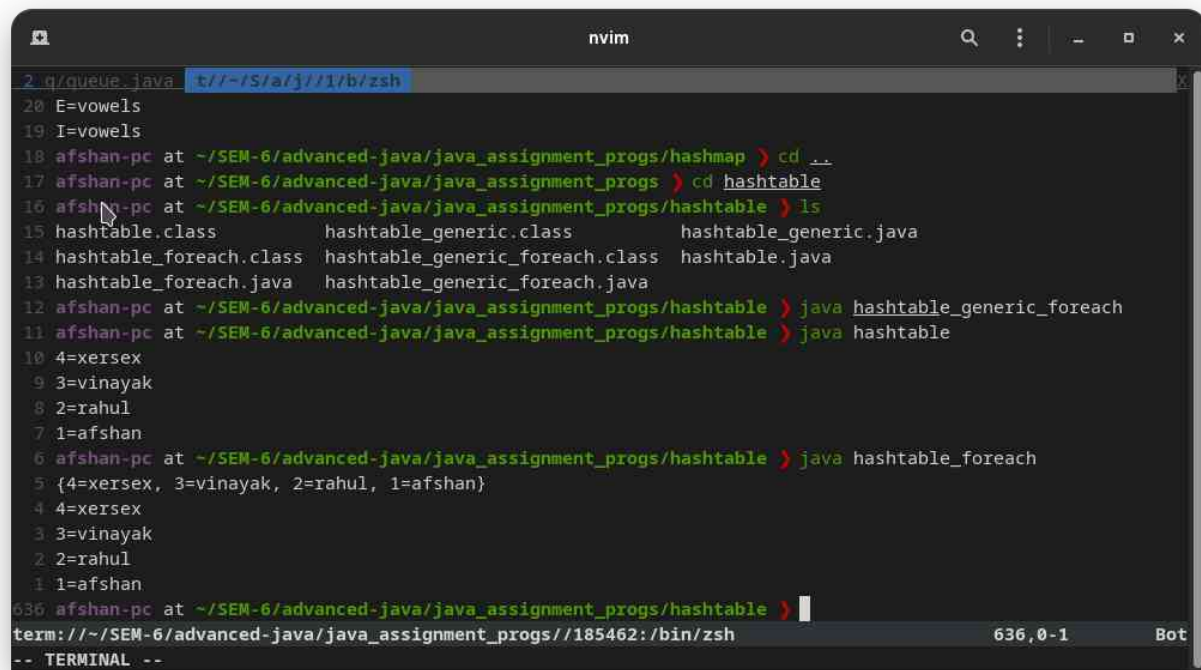
```

import java.util.Hashtable;
import java.util.Set;

public class hashtable_foreach {
    public static void main(String[] args) {
        Hashtable<Integer,String> studentsList = new Hashtable<>();
        studentsList.put(1,"afshan");
        studentsList.put(2,"rahul");
        studentsList.put(3,"vinayak");
        studentsList.put(4, "xersex");

        System.out.println(studentsList);
        Set set = studentsList.entrySet();
        for (Object o : set) {
            System.out.println(o);
        }
    }
}

```



```

nvim
2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/hashtable
20 E=vowels
19 I=vowels
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > cd ..
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd hashtable
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > ls
15 hashtable.class      hashtable_generic.class  hashtable_generic.java
14 hashtable_foreach.class hashtable_generic_foreach.class hashtable.java
13 hashtable_foreach.java hashtable_generic_foreach.java
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic_foreach
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable
10 4=xersex
 9 3=vinayak
 8 2=rahul
 7 1=afshan
 6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_foreach
 5 {4=xersex, 3=vinayak, 2=rahul, 1=afshan}
 4 4=xersex
 3 3=vinayak
 2 2=rahul
 1 1=afshan
636 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 636,0-1 Bot
-- TERMINAL --

```

```

import java.util.Hashtable;
import java.util.Iterator;
import java.util.Set;
import java.util.Map.Entry;

public class hashtable_generic {
    public static void main(String[] args) {
        Hashtable studentsList = new Hashtable();
        studentsList.put(1,"afshan");
        studentsList.put(2,"rahul");
        studentsList.put(3,"vinayak");
        studentsList.put(4, "xersex");
        studentsList.put("Nil", "Transfer certificate given");
        studentsList.put(6, "zeus");

        Set entryset = studentsList.entrySet();
        Iterator itr = entryset.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 hashtable_foreach.java hashtable_generic_foreach.java
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic_foreach
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable
17 4=xersex
16 3=vinayak
15 2=rahul
14 1=afshan
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_foreach
12 {4=xersex, 3=vinayak, 2=rahul, 1=afshan}
11 4=xersex
10 3=vinayak
9 2=rahul
8 1=afshan
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic
6 6=zeus
5 4=xersex
4 3=vinayak
3 2=rahul
2 Nil=Transfer certificate given
1 1=afshan
643 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 643,0-1 Bot
-- TERMINAL --

```



```

import java.util.Hashtable;
import java.util.Iterator;
import java.util.Set;
import java.util.Map.Entry;

public class hashtable_generic_foreach {
    public static void main(String[] args) {
        Hashtable studentsList = new Hashtable();
        studentsList.put(1,"afshan");
        studentsList.put(2,"rahul");
        studentsList.put(3,"vinayak");
        studentsList.put(4, "xersex");
        studentsList.put("Nil", "Transfer certificate given");
        studentsList.put(6, "zeus");

        Set set = studentsList.entrySet();
        for (Object o : set) {
            System.out.println(o);
        }
    }
}

```

```

nvim
2 q/queue.java t//~/.S/a/j/1/b/zsh
20 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_foreach
19 {4=xersex, 3=vinayak, 2=rahul, 1=afshan}
18 4=xersex
17 3=vinayak
16 2=rahul
15 1=afshan
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic
13 6=zeus
12 4=xersex
11 3=vinayak
10 2=rahul
9 Nil=Transfer certificate given
8 1=afshan
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic_foreach
6 6=zeus
5 4=xersex
4 3=vinayak
3 2=rahul
2 Nil=Transfer certificate given
1 1=afshan
650 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 650,0-1 Bot
-- TERMINAL --

```

```

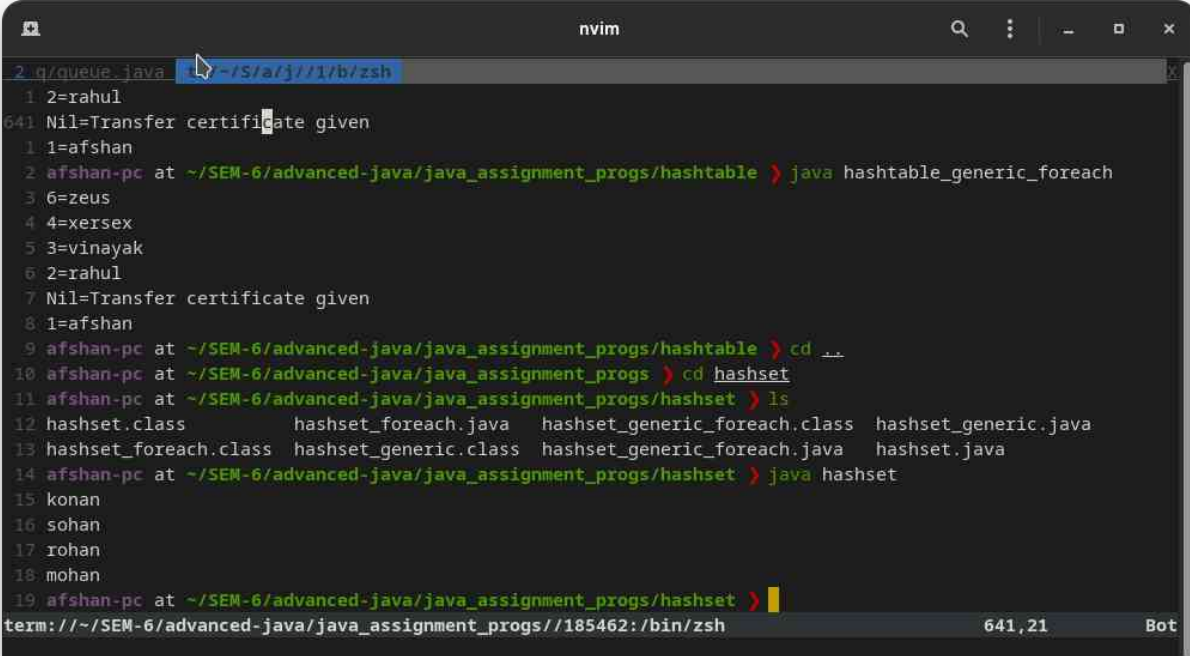
import java.util.*;

public class hashset {
    public static void main(String[] args) {
        HashSet<String> obj = new HashSet<>();
        obj.add("rohan");
        obj.add("sohan");
        obj.add("mohan");
        obj.add("konan");
        // Traversing elements

        Iterator<String> itr = obj.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java ~/S/a/j/1/b/zsh
1 2=raahul
641 Nil=Transfer certificate given
1 1=afshan
2 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > java hashtable_generic_foreach
3 6=zeus
4 4=xersex
5 3=vinayak
6 2=raahul
7 Nil=Transfer certificate given
8 1=afshan
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > cd ..
10 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd hashset
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > ls
12 hashset.class      hashset_foreach.java  hashset_generic_foreach.class  hashset_generic.java
13 hashset_foreach.class  hashset_generic.class  hashset_generic_foreach.java  hashset.java
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset
15 konan
16 sohan
17 rohan
18 mohan
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset >
term: //~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 641,21 Bot

```

```

import java.util.*;

public class hashset_foreach {
    public static void main(String[] args) {
        HashSet<String> obj = new HashSet<>();
        obj.add("rohan");
        obj.add("sohan");
        obj.add("mohan");
        obj.add("konan");
        // Traversing elements

        for (String s : obj) {
            System.out.println(s);
        }
    }
}

```

```

nvim
2 q/queue.java t//~/.S/a/j/1/b/zsh
20 4=xersex
19 3=vinayak
18 2=rahul
17 Nil=Transfer certificate given
16 1=afshan
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashtable > cd ..
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd hashset
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > ls
12 hashset.class      hashset_foreach.java  hashset_generic_foreach.class  hashset_generic.java
11 hashset_foreach.class hashset_generic.class hashset_generic_foreach.java  hashset.java
10 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset
9  konan
8  sohan
7  rohan
6  mohan
5  afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_foreach
4  konan
3  sohan
2  rohan
1  mohan
665 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset >
term://~/.SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 665,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class hashset_generic {
    public static void main(String[] args) {
        HashSet obj = new HashSet();
        obj.add("rohan");
        obj.add("sohan");
        obj.add("mohan");
        obj.add("konan");
        obj.add(1);
        obj.add(2.8);
        // Traversing elements

        Iterator itr = obj.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/hashset > ls
20 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > ls
19 hashset.class hashset_foreach.java hashset_generic_foreach.class hashset_generic.java
18 hashset_foreach.class hashset_generic.class hashset_generic_foreach.java hashset.java
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset
16 konan
15 sohan
14 rohan
13 mohan
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_foreach
11 konan
10 sohan
9 rohan
8 mohan
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_generic
6 konan
5 2.8
4 sohan
3 1
2 rohan
1 mohan
672 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 672,0-1 Bot
-- TERMINAL --

```

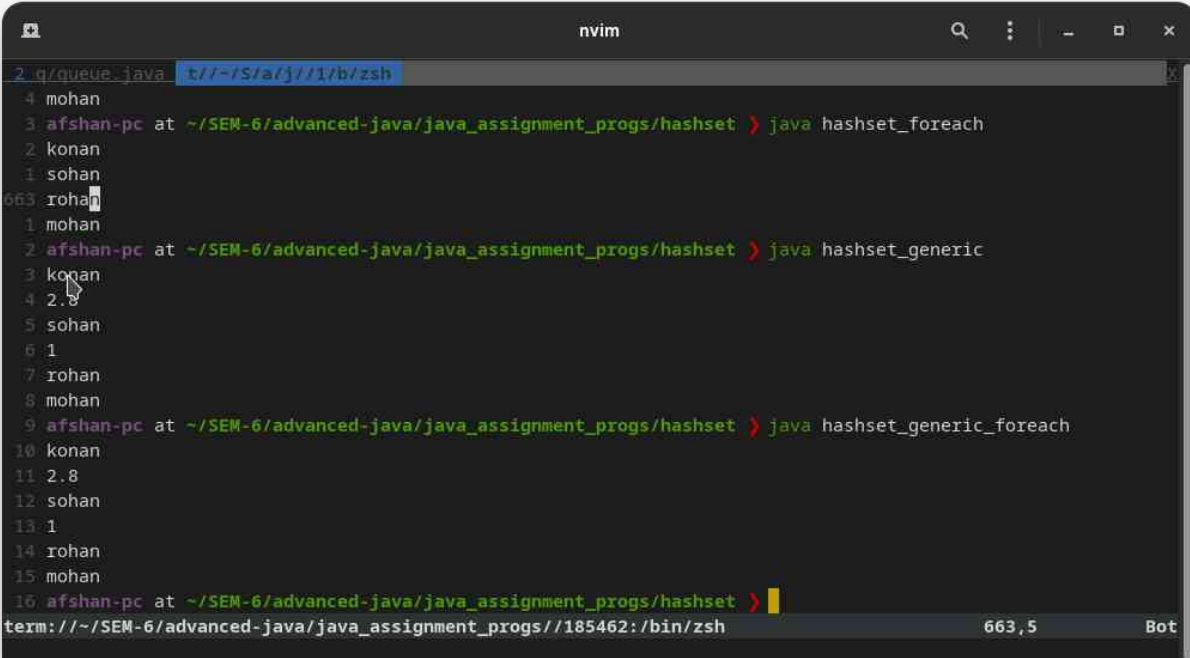
```

import java.util.*;

public class hashset_generic_foreach {
    public static void main(String[] args) {
        HashSet obj = new HashSet();
        obj.add("rohan");
        obj.add("sohan");
        obj.add("mohan");
        obj.add("konan");
        obj.add(1);
        obj.add(2.8);

        // Traversing elements
        for (Object o : obj) {
            System.out.println(o);
        }
    }
}

```



```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
4 mohan
3 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_foreach
2 konan
1 sohan
663 rohan
1 mohan
2 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_generic
3 konan
4 2.8
5 sohan
6 1
7 rohan
8 mohan
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_generic_foreach
10 konan
11 2.8
12 sohan
13 1
14 rohan
15 mohan
16 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 663,5 Bot

```

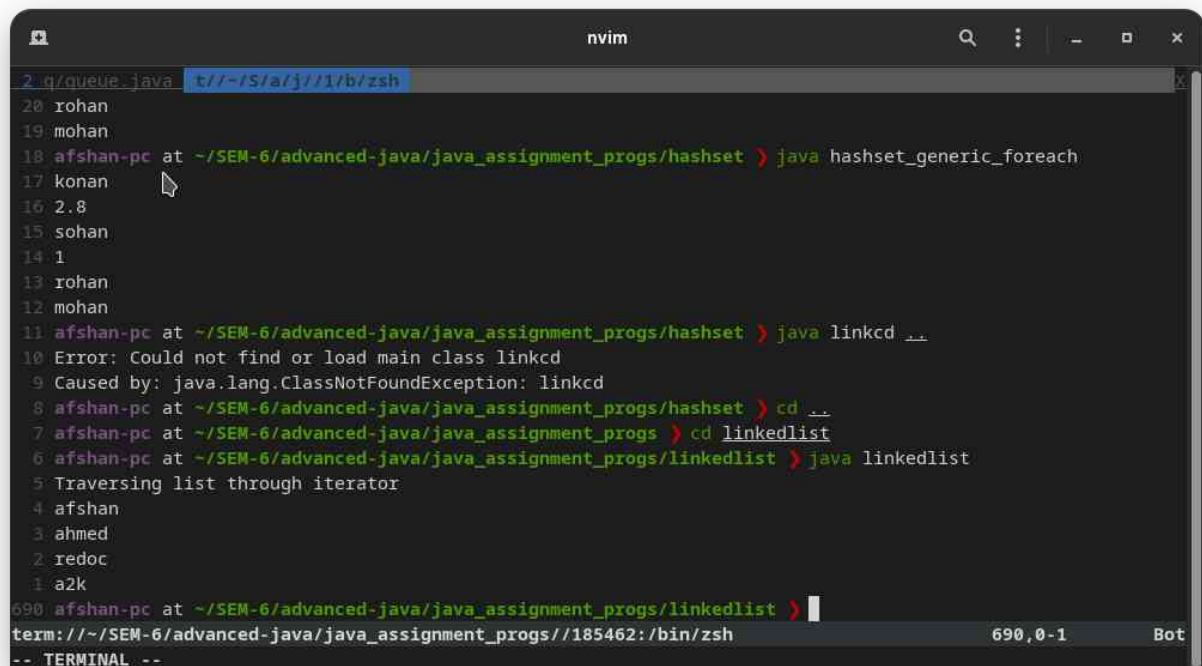
```

import java.util.*;

public class linkedlist {
    public static void main(String args[]) {
        LinkedList<String> a1 = new LinkedList<String>();
        a1.add("afshan");
        a1.add("ahmed");
        a1.add("redoc");
        a1.add("a2k");

        Iterator<String> itr = a1.iterator();
        System.out.println("Traversing list through iterator");
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

2 q/queue.java t//~/S/a/j//1/b/zsh
20 rohan
19 moham
18 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java hashset_generic_foreach
17 konan
16 2.8
15 sohan
14 1
13 rohan
12 moham
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java linkcd ..
10 Error: Could not find or load main class linkcd
9 Caused by: java.lang.ClassNotFoundException: linkcd
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > cd ..
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd linkedlist
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist
5 Traversing list through iterator
4 afshan
3 ahmed
2 redoc
1 a2k
690 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 690,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class linkedlist_foreach {
    public static void main(String args[]) {
        LinkedList<String> a1 = new LinkedList<String>();
        a1.add("afshan");
        a1.add("ahmed");
        a1.add("a2k");
        a1.add("coder");

        System.out.println("Traversing list through foreach loop");
        for (String str : a1) {
            System.out.println(str);
        }
    }
}

```

```

nvim
2 q/queue.java t//~/.S/a/r/j//1/b/zsh
20 1
19 rohan
18 mohan
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > java linkcd ..
16 Error: Could not find or load main class linkcd
15 Caused by: java.lang.ClassNotFoundException: linkcd
14 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/hashset > cd ..
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd linkedlist
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist
11 Traversing list through iterator
10 afshan
9 ahmed
8 redoc
7 a2k
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist_foreach
5 Traversing list through foreach loop
4 afshan
3 ahmed
2 a2k
1 coder
696 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 696,0-1 Bot
-- TERMINAL --

```

```

import java.util.Iterator;
import java.util.LinkedList;

public class linkedlist_generic {
    public static void main(String[] args) {
        LinkedList obj = new LinkedList();

        obj.add("afshn");
        obj.add("banna");
        obj.add("ahmed");
        obj.add(5);

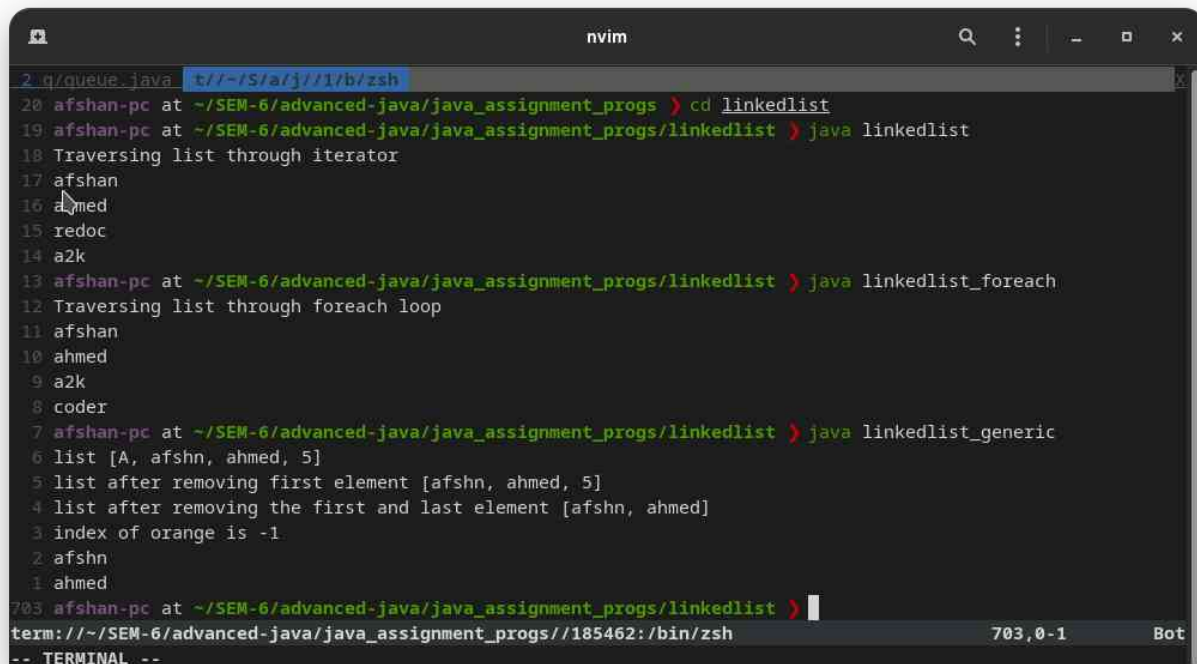
        obj.remove("4.5");
        obj.remove(1);
        obj.addFirst('A');

        System.out.println("list " + obj);

        obj.removeFirst();
        System.out.println("list after removing first element " + obj);
        obj.removeLast();
        System.out.println("list after removing the first and last element " + obj);
        System.out.println("index of orange is " + obj.indexOf("orange"));

        Iterator itr = obj.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd linkedlist
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist
18 Traversing list through iterator
17 afshan
16 ahmed
15 redoc
14 a2k
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist_foreach
12 Traversing list through foreach loop
11 afshan
10 ahmed
9 a2k
8 coder
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist_generic
6 list [A, afshn, ahmed, 5]
5 list after removing first element [afshn, ahmed, 5]
4 list after removing the first and last element [afshn, ahmed]
3 index of orange is -1
2 afshn
1 ahmed
703 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 703,0-1 Bot
-- TERMINAL --

```



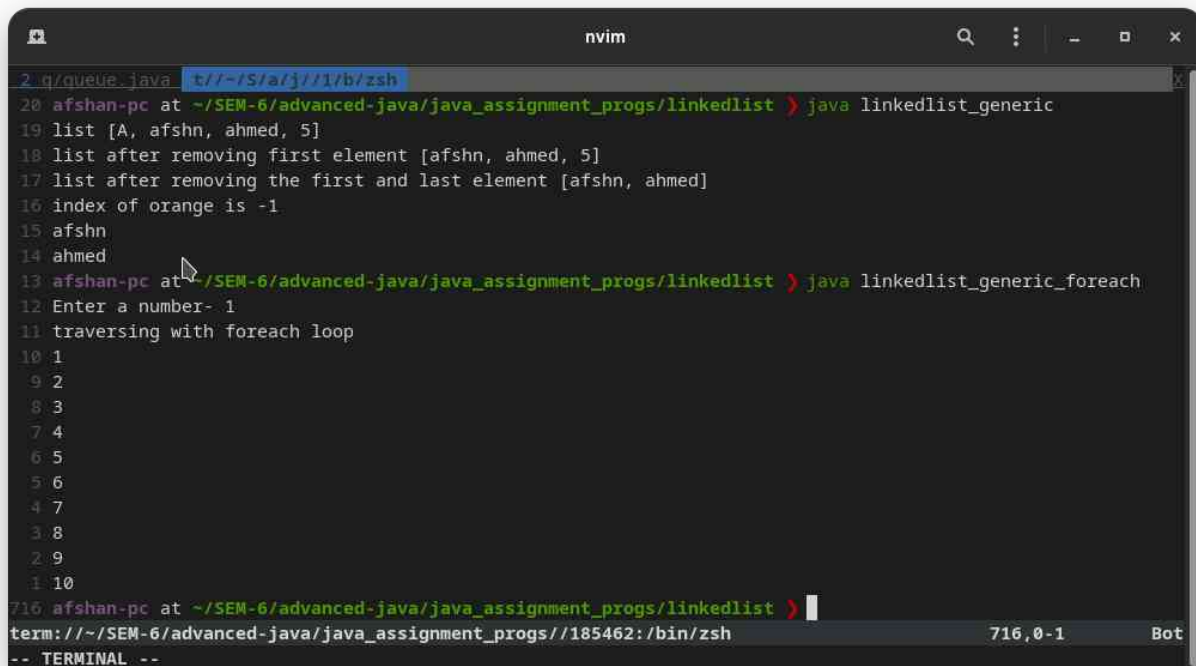
```

import java.util.*;
import java.util.LinkedList;

public class linkedlist_generic_foreach {
    public static void main(String[] args) {

        LinkedList obj = new LinkedList<>();
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number- ");
        int a = sc.nextInt();
        for (int i = 1; i <= 10; i++) {
            obj.add(i * a);
        }
        System.out.println("traversing with foreach loop");
        for (Object in : obj) {
            System.out.println(in);
        }
        sc.close();
    }
}

```



```

nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist_generic
19 list [A, afshn, ahmed, 5]
18 list after removing first element [afshn, ahmed, 5]
17 list after removing the first and last element [afshn, ahmed]
16 index of orange is -1
15 afshn
14 ahmed
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist > java linkedlist_generic_foreach
12 Enter a number- 1
11 traversing with foreach loop
10 1
9 2
8 3
7 4
6 5
5 6
4 7
3 8
2 9
1 10
716 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedlist >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 716,0-1 Bot
-- TERMINAL --

```

```

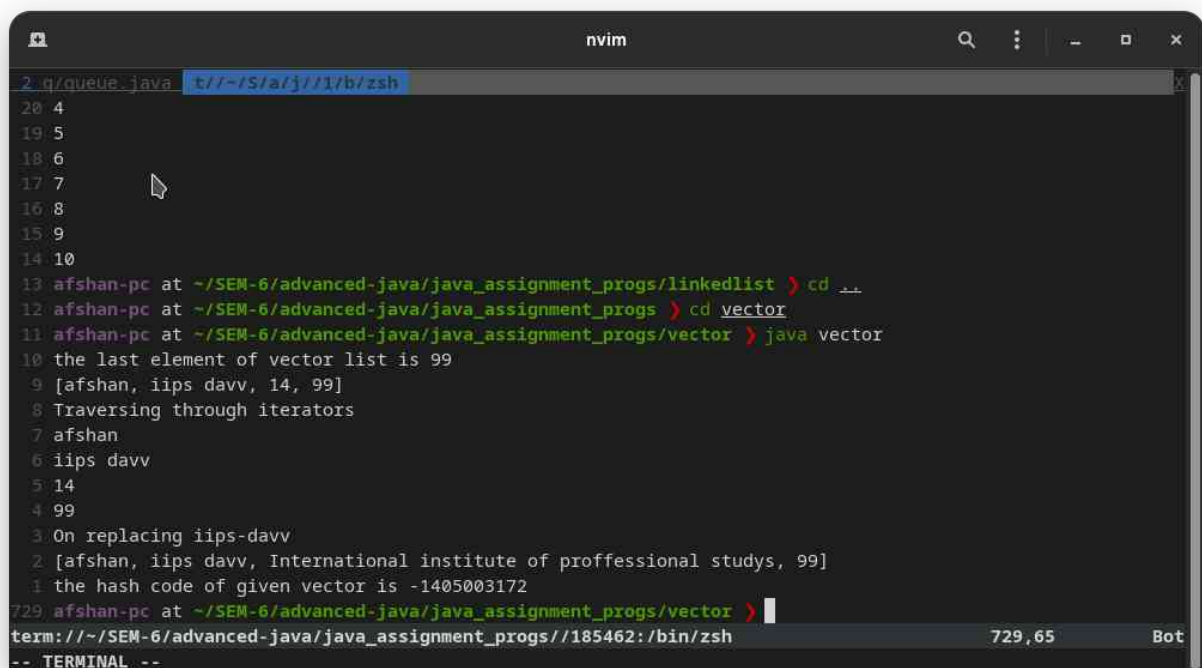
import java.util.Collections;
import java.util.Iterator;
import java.util.Vector;

public class vector {
    public static void main(String[] args) {
        Vector obj = new Vector();
        obj.add("afshan");
        obj.add("it-2k19-03");
        obj.add("iips davv");
        obj.insertElementAt(34, 3);
        obj.insertElementAt(14, 4);
        obj.insertElementAt(99, 5);
        obj.remove(1);
        obj.removeElement(34);
        System.out.println("the last element of vector list is " + obj.lastElement());
        System.out.println(obj);

        Iterator itr = obj.iterator();
        System.out.println("Traversing through iterators");
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
        System.out.println("On replacing iips-davv ");
        obj.set(2, "International institute of proffessional studys");
        System.out.println(obj);

        System.out.println("the hash code of given vector is " + obj.hashCode());
    }
}

```



```

nvim
2 q/queue.java t/t-/S/a/t/j/1/b/zsh
20 4
19 5
18 6
17 7
16 8
15 9
14 10
13 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/linkedList > cd ..
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd vector
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector > java vector
10 the last element of vector list is 99
9 [afshan, iips davv, 14, 99]
8 Traversing through iterators
7 afshan
6 iips davv
5 14
4 99
3 On replacing iips-davv
2 [afshan, iips davv, International institute of proffessional studys, 99]
1 the hash code of given vector is -1405003172
729 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 729,65 Bot
-- TERMINAL --

```

```

import java.util.*;

public class vector_foreach {
    public static void main(String args[]) {
        // initial capacity=4
        Vector obj = new Vector(4);

        obj.add(2);
        obj.add("ramesh");
        obj.add("suresh");
        obj.add("mahesh");
        obj.add("kamlesh");
        obj.add(1);
        // Check size and capacity
        System.out.println("Size is: " + obj.size());
        System.out.println("Default capacity is: " + obj.capacity());

        obj.addElement("mohan");
        obj.addElement("sohan");
        obj.addElement("rohan");

        System.out.println("Size after insertion of more element: " + obj.size());
        System.out.println("Capacity after insertion is: " + obj.capacity());

        System.out.println("Elements are: " + obj);
        // Checking if student is present or not in this vector
        if (obj.contains("ramesh")) {
            System.out.println("ramesh is present at the index " + obj.indexOf("ramesh"));
        } else {
            System.out.println("ramesh is not present in the list.");
        }
        // Get the first element
        System.out.println("The first student of the vector list is = " + obj.firstElement());
        // Get the last element
        System.out.println("The last student of the vector list is = " + obj.lastElement());

        System.out.println("student vector list print through for each loop :-");
        for (Object i : obj) {
            System.out.println(i);
        }
    }
}

```

```
nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
20 the hash code of given vector is -1405003172
19 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector > java vector_foreach
18 Size is: 6
17 Default capacity is: 8
16 Size after insertion of more element: 9
15 Capacity after insertion is: 16
14 Elements are: [2, ramesh, suresh, mahesh, kamlesh, 1, mohan, sohan, rohan]
13 ramesh is present at the index 1
12 The first student of the vector list is = 2
11 The last student of the vector list is = rohan
10 student vector list print through for each loop :-
9 2
8 ramesh
7 suresh
6 mahesh
5 kamlesh
4 1
3 mohan
2 sohan
1 rohan
748 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 748,0-1 Bot
-- TERMINAL --
```

```

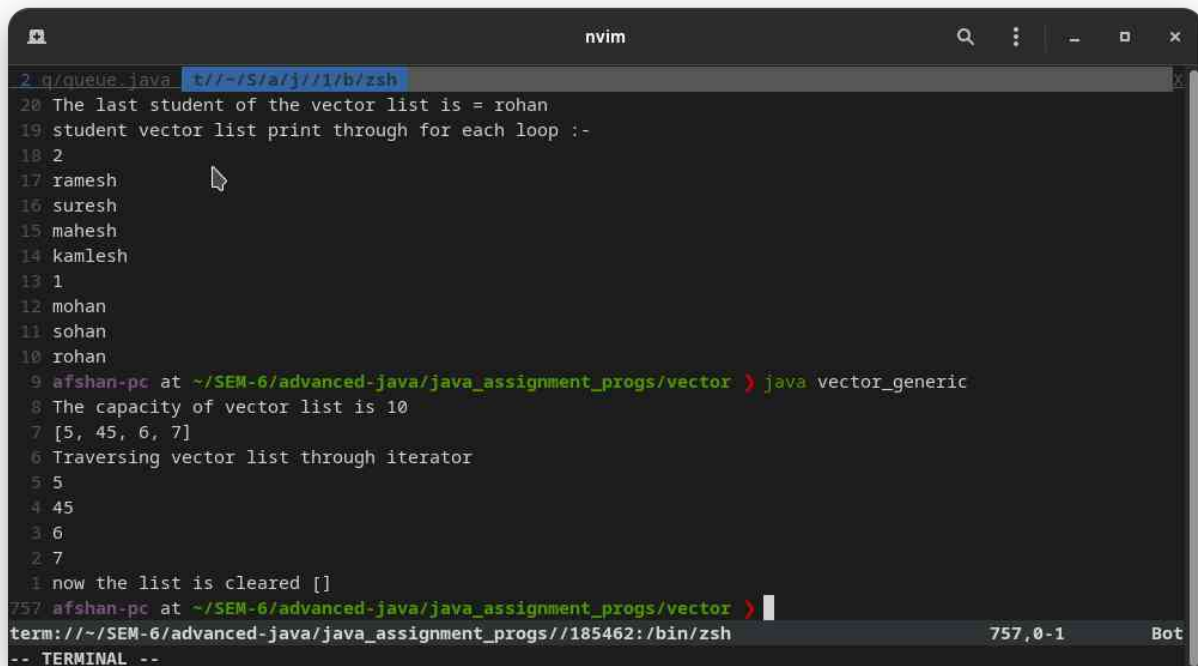
import java.util.*;

public class vector_generic {

    public static void main(String[] args) {
        Vector<Integer> obj = new Vector<Integer>();
        obj.add(5);
        obj.add(6);
        obj.add(7);
        obj.add(1, 45); // in 1st place 45 is inserted
        System.out.println("The capacity of vector list is " + obj.capacity());

        Iterator<Integer> itr = obj.iterator();
        System.out.println(obj);
        System.out.println("Traversing vector list through iterator");
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
        obj.clear();
        System.out.println("now the list is cleared " + obj);
    }
}

```



```

nvim
2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/vector
20 The last student of the vector list is = rohan
19 student vector list print through for each loop :-
18 2
17 ramesh
16 suresh
15 mahesh
14 kamlesh
13 1
12 mohan
11 sohan
10 rohan
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector > java vector_generic
8 The capacity of vector list is 10
7 [5, 45, 6, 7]
6 Traversing vector list through iterator
5 5
4 45
3 6
2 7
1 now the list is cleared []
757 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector >
term://~/SEM-6/advanced-java/java_assignment_progs/185462:/bin/zsh 757,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class vector_generic_foreach {

    public static void main(String[] args) {
        Vector<Integer> obj = new Vector<Integer>();
        obj.add(5);
        obj.add(6);
        obj.add(7);
        obj.add(1, 45);// in 1st place 45 is inserted
        System.out.println("The capacity of vector list is " + obj.capacity());

        System.out.println("Traversing vector list through foreach loop");
        for (Integer in : obj) {
            System.out.println(in);
        }
        obj.clear();
        System.out.println("now the list is cleared " + obj);
    }
}

```

```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
20 mohan
19 sohan
18 rohan
17 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector > java vector_generic
16 The capacity of vector list is 10
15 [5, 45, 6, 7]
14 Traversing vector list through iterator
13 5
12 45
11 6
10 7
9 now the list is cleared []
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector > java vector_generic_foreach
7 The capacity of vector list is 10
6 Traversing vector list through foreach loop
5 5
4 45
3 6
2 7
1 now the list is cleared []
765 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/vector >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 765,0-1 Bot
-- TERMINAL --

```

```

import java.util.*;

public class stack {
    public static void main(String[] args) {
        // Creating a Stack
        Stack nos = new Stack();
        // pushing values in stack
        nos.push("This is the start");
        for (int i = 0; i <= 10; i++) {
            nos.push(i);
        }
        nos.push("This is the end");

        System.out.println("Traversing with Iterators");
        Iterator itr = nos.iterator();
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }

        System.out.println("after removing the element at index 1");
        nos.removeElementAt(1);
        System.out.println(nos);

        // printing the stack
        System.out.println("Print Stack before pop:");
        System.out.println(nos);
        System.out.println("Position of 8 from the top is " + nos.search(8));
        System.out.println("Position of 10 from the top is " + nos.search(10));

        // returning the number at the top of the stack and removing it
        System.out.println("pop => " + nos.pop());
        System.out.println("pop => " + nos.pop());
        System.out.println("pop => " + nos.pop());

        // printing the stack
        System.out.println("Print Stack after pop:");
        System.out.println(nos);
        // accessing the number at the top of the stack but not removing it
        System.out.println("Number on top of the stack is => " + nos.peek());
        // checking if the stack is empty or not
        System.out.println("Is stack empty? Ans:" + nos.empty());
    }
}

```

```
nvim
2 q/queue.java t//~/S/a/j//1/b/zsh
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd stack
10 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack > java stack
9 Traversing with Iterators
8 This is the start
7 0
6 1
5 2
4 3
3 4
2 5
1 6
778 7
1 8
2 9
3 10
4 This is the end
5 after removing the element at index 1
6 [This is the start, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, This is the end]
7 Print Stack before pop:
8 [This is the start, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, This is the end]
9 Position of 8 from the top is 4
10 Position of 10 from the top is 2
11 pop => This is the end
12 pop => 10
13 pop => 9
14 Print Stack after pop:
15 [This is the start, 1, 2, 3, 4, 5, 6, 7, 8]
16 Number on top of the stack is => 8
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 778,1 99%
```



```

import java.util.Iterator;
import java.util.Stack;

public class stack_generic {
    public static void main(String[] args) {
        Stack<String> obj = new Stack<>();
        obj.push("afshan");
        obj.push("ahmed");
        obj.push("rohan");
        obj.push("mohan");
        obj.pop();
        System.out.println("size of stack is " + obj.size());
        System.out.println("capacity is " + obj.capacity());
        System.out.println("is stack empty?" + obj.empty());
        System.out.println("peek of stack -" + obj.peek());
        System.out.println("last element of stack is - " + obj.lastElement());
        System.out.println("the index of rai is " + obj.search("rai"));

        Iterator<String> itr = obj.iterator();

        System.out.println("Traversing the stack through the iterator");
        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```

```

nvim
2 q/queue.java t://-/S/a/j//1/b/zsh
3 Print Stack after pop:
2 [This is the start, 1, 2, 3, 4, 5, 6, 7, 8]
1 Number on top of the stack is => 8
795 Is stack empty? Ans: false
1 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack > java stack_generic
2 size of stack is 3
3 capacity is 10
4 is stack empty? false
5 peek of stack -rohan
6 last element of stack is - rohan
7 the index of rai is -1
8 Traversing the stack through the iterator
9 afshan
10 ahmed
11 rohan
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack >
term://-/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 795,22 Bot

```

```

import java.util.Stack;
import java.util.Vector;

public class stack_foreach {
    public static void main(String[] args) {
        Stack stk = new Stack();
        // pushing elements into Stack
        stk.push("tomato");
        stk.push("brinjal");
        stk.push("cauliflower");
        stk.push("chilli");
        stk.push(1);
        stk.push(2);

        boolean result = stk.empty();
        System.out.println("Is the stack empty or not? " + result);

        int x = stk.size();
        System.out.println("The stack size is: " + x);
        System.out.println("Stack: " + stk);
        // Access element from the top of the stack
        Object vegetable = stk.peek();
        // prints stack
        System.out.println("Element at top: " + vegetable);

        System.out.println("By for each loop");
        for (Object i : stk) {
            System.out.println(i);
        }
    }
}

```

```

nvim
2 q/queue.java t//~/SEM-6/advanced-java/java_assignment_progs/stack
15 afshan
14 ahmed
13 rohan
12 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack > java stack_foreach
11 Is the stack empty or not? false
10 The stack size is: 6
9 Stack: [tomato, brinjal, cauliflower, chilli, 1, 2]
8 Element at top: 2
7 By for each loop
6 tomato
5 brinjal
4 cauliflower
3 chilli
2 1
1 2
819 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack >
term: //~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 819,0-1 Bot
-- TERMINAL --

```

```

import java.util.Stack;

public class stack_generic_foreach {
    public static void main(String[] args) {
        Stack<String> obj = new Stack<>();
        obj.push("afshan");
        obj.push("ahmed");
        obj.push("rohan");
        obj.push("mohan");
        obj.pop();
        System.out.println("size of stack is " + obj.size());
        System.out.println("capacity is " + obj.capacity());
        System.out.println("is stack empty?" + obj.empty());
        System.out.println("peek of stack -" + obj.peek());
        System.out.println("last element of stack is - " + obj.lastElement());
        System.out.println("the index of rai is " + obj.search("rai"));

        System.out.println("Traversing the stack through the foreach");
        for (String s : obj) {
            System.out.println(s);
        }
    }
}

```

```

nvim
2 q/queue.java t://~/S/a/j//1/b/zsh
15 cauliflower
14 chilli
13 1
12 2
11 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack > java stack_generic_foreach
10 size of stack is 3
9 capacity is 10
8 is stack empty?false
7 peek of stack -rohan
6 last element of stack is - rohan
5 the index of rai is -1
4 Traversing the stack through the foreach
3 afshan
2 ahmed
1 rohan
830 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 830,0-1 Bot
-- TERMINAL --

```

```

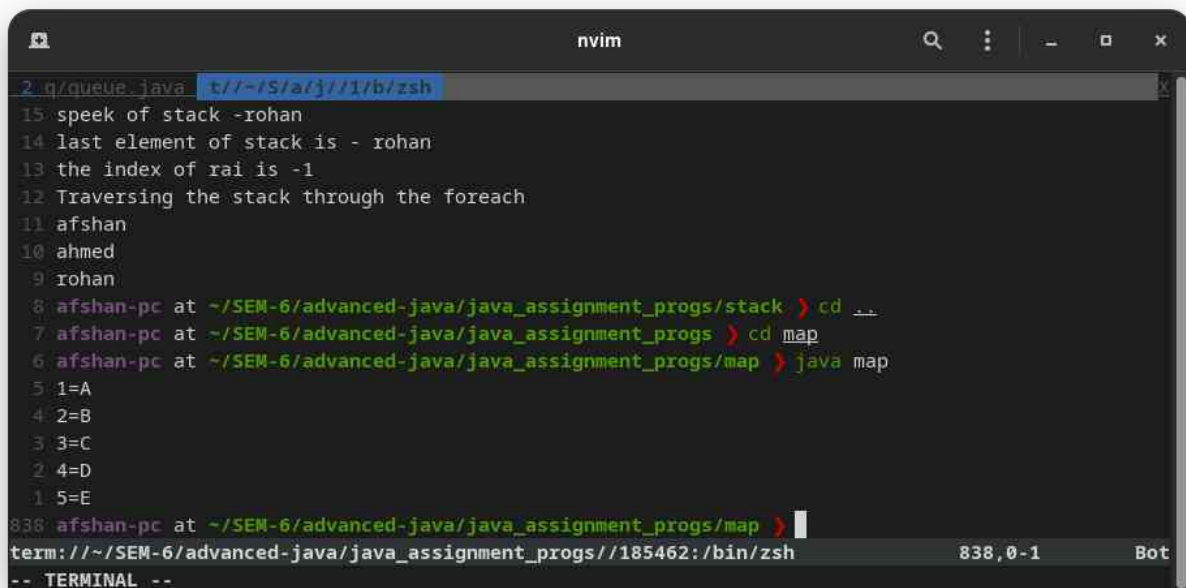
import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class map {
    public static void main(String[] args) {
        Map<Integer,Character> alphabets = new HashMap<>();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        //...

        Set<Entry<Integer,Character>> alphabets_entry = alphabets.entrySet();
        Iterator<Entry<Integer,Character>> itr = alphabets_entry.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java t/~/SEM-6/advanced-java/java_assignment_progs/stack
15 speak of stack -rohan
14 last element of stack is - rohan
13 the index of rai is -1
12 Traversing the stack through the foreach
11 afshan
10 ahmed
9 rohan
8 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/stack > cd ..
7 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs > cd map
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map
5 1=A
4 2=B
3 3=C
2 4=D
1 5=E
838 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map >
term: ~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 838, 0-1 Bot
-- TERMINAL --

```

```

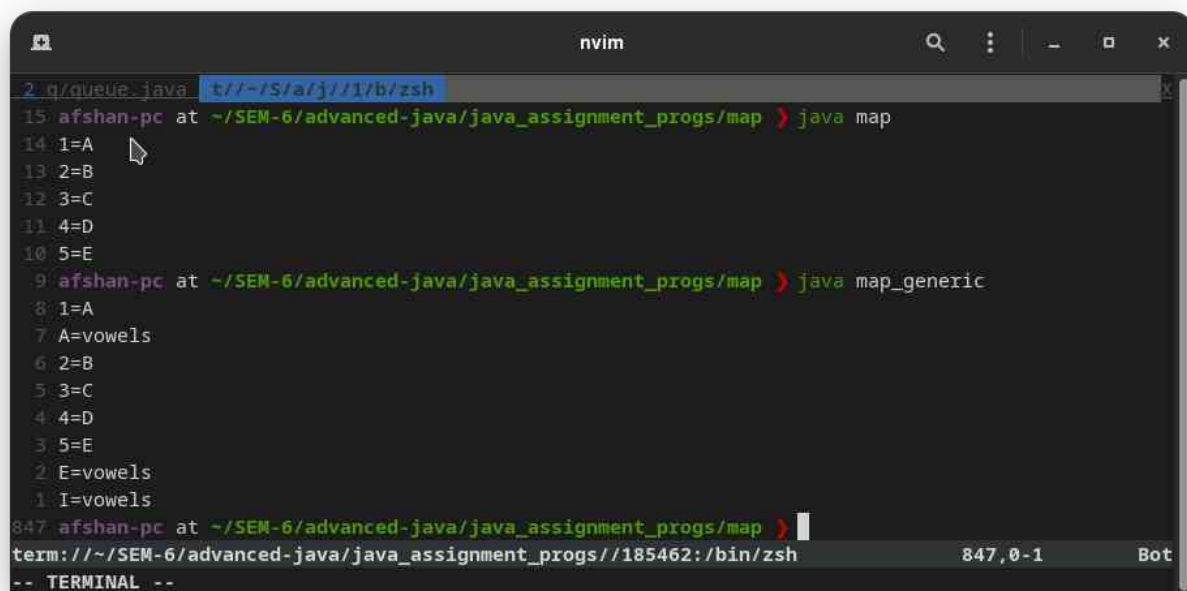
import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class map_generic {
    public static void main(String[] args) {
        Map alphabets = new HashMap();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        alphabets.put('A', "vowels");
        alphabets.put('E', "vowels");
        alphabets.put('I', "vowels");

        Set alphabets_entry = alphabets.entrySet();
        Iterator itr = alphabets_entry.iterator();

        while (itr.hasNext()) {
            System.out.println(itr.next());
        }
    }
}

```



```

nvim
2 q/queue.java t//~/S/a/r/j//1/b/zsh
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map
14 1=A
13 2=B
12 3=C
11 4=D
10 5=E
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map_generic
8 1=A
7 A=vowels
6 2=B
5 3=C
4 4=D
3 5=E
2 E=vowels
1 I=vowels
847 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 847,0-1 Bot
-- TERMINAL --

```

```

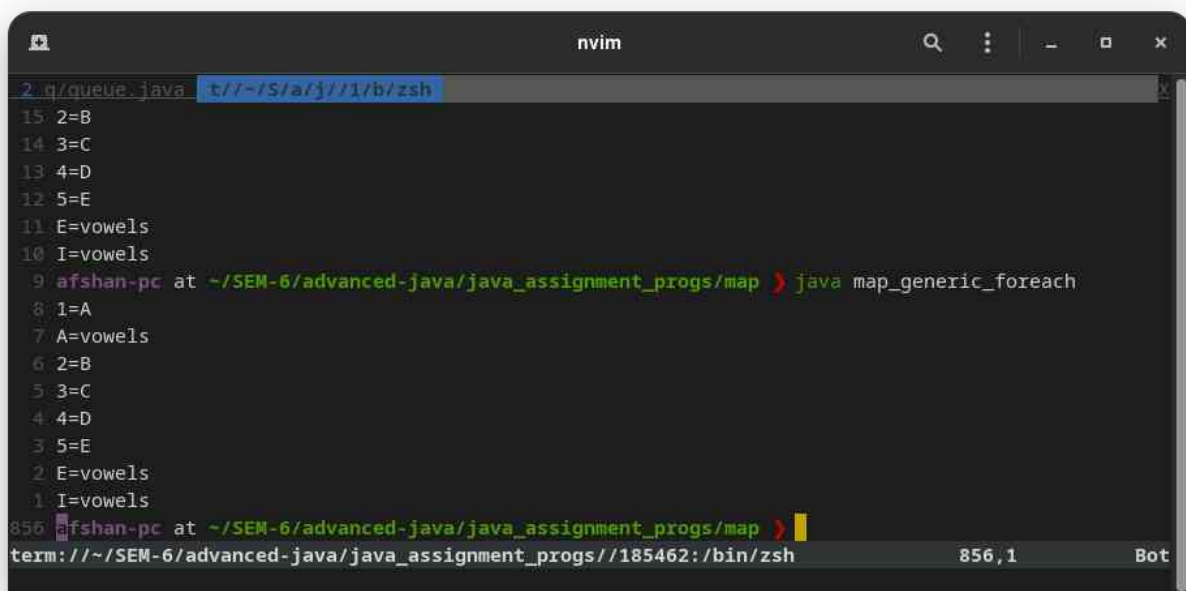
import java.util.HashMap;
import java.util.Iterator;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class map_generic_foreach {
    public static void main(String[] args) {
        Map alphabets = new HashMap();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        alphabets.put('A', "vowels");
        alphabets.put('E', "vowels");
        alphabets.put('I', "vowels");

        //...

        Set alphabets_entry = alphabets.entrySet();
        for (Object o : alphabets_entry) {
            System.out.println(o);
        }
    }
}

```



```

nvim
2 q/queue.java t/~/S/a/j/1/b/zsh
15 2=B
14 3=C
13 4=D
12 5=E
11 E=vowels
10 I=vowels
9 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map_generic_foreach
8 1=A
7 A=vowels
6 2=B
5 3=C
4 4=D
3 5=E
2 E=vowels
1 I=vowels
856 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map >
term: ~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 856,1 Bot

```

```

import java.util.HashMap;
import java.util.Map;
import java.util.Map.Entry;
import java.util.Set;

public class map_foreach {
    public static void main(String[] args) {
        Map<Integer,Character> alphabets = new HashMap<>();
        alphabets.put(1, 'A');
        alphabets.put(2, 'B');
        alphabets.put(3, 'C');
        alphabets.put(4, 'D');
        alphabets.put(5, 'E');
        //...

        Set<Entry<Integer,Character>> alphabets_entry = alphabets.entrySet();

        for (Entry e : alphabets_entry ) {
            System.out.println(e);
        }
    }
}

```

```

nvim
2 q/queue.java t://-/S/a/j//1/b/zsh
15 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map_generic_foreach
14 1=A
13 A=vowels
12 2=B
11 3=C
10 4=D
9 5=E
8 E=vowels
7 I=vowels
6 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map > java map_foreach
5 1=A
4 2=B
3 3=C
2 4=D
1 5=E
862 afshan-pc at ~/SEM-6/advanced-java/java_assignment_progs/map >
term://~/SEM-6/advanced-java/java_assignment_progs//185462:/bin/zsh 862,0-1 Bot
-- TERMINAL --

```