## **Collections**

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- can only work with reference types.

## ArrayList

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- based on an array structure
- widely used because of its flexibility and functionality
- a resizable-array

# Using ArrayList

1. Import java.util package

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- 2. Declaration, indicate the type of objects to be stored in the list.

ArrayList<MyDate> dates;

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- 2. Declaration, indicate the type of objects to be stored in the list.

```
ArrayList<MyDate> dates;
```

3. Instantiation, choose the constructor to use.

```
dates = new ArrayList<> ();
```

# Common operations of ArrayList

• dates.add (new MyDate (7, 1, 2020));

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- dates.add (new MyDate (7, 1, 2020));
- dates.add (0, new MyDate (7, 7, 2020));

- dates.add (new MyDate (7, 1, 2020));
- dates.add (0, new MyDate (7, 7, 2020));
- boolean bRemoved; bRemoved = dates.remove (new MyDate (7, 1, 2020));

- dates.add (new MyDate (7, 1, 2020));
- dates.add (0, new MyDate (7, 7, 2020));
- boolean bRemoved;
   bRemoved = dates.remove (new MyDate (7, 1, 2020));
- MyDate delDate = dates.remove (0);

dates.add (new MyDate (7, 1, 2020));
dates.add (0, new MyDate (7, 7, 2020));
boolean bRemoved;
bRemoved = dates.remove (new MyDate (7, 1, 2020));
MyDate delDate = dates.remove (0);
MyDate delDate = dates.get (0);

```
• dates.add (new MyDate (7, 1, 2020));
• dates.add (0, new MyDate (7, 7, 2020));
• boolean bRemoved;
  bRemoved = dates.remove (new MyDate (7, 1, 2020));

    MyDate delDate = dates.remove (0);

    MyDate delDate = dates.get (0);

    MyDate oldDate;

  oldDate = dates.set (1, new MyDate (8, 8, 2020));
```

```
• dates.add (new MyDate (7, 1, 2020));
• dates.add (0, new MyDate (7, 7, 2020));
• boolean bRemoved;
  bRemoved = dates.remove (new MyDate (7, 1, 2020));

    MyDate delDate = dates.remove (0);

    MyDate delDate = dates.get (0);

    MyDate oldDate;

  oldDate = dates.set (1, new MyDate (8, 8, 2020));
• int nSize = dates.size());
```

Thank you!