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# CS 249: Assignment 10

## Generics

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### Theory Questions (14%)

1. (2%) In Java, write a **generic** class MyClass that has a type parameter E.

```
public class MyClass<E>{
}
```

2. (2%) In Java, write a **generic** class YourClass that has a type parameter E **that extends Number**.

```
public class YourClass<E extends Number>{
}
```

3. (2%) In Java, write a **generic** class OurClass that has a type parameter E **that implements Comparable**.

```
public class OurClass<E implements Comparable>{
}
```

4. (2%) In Java, write a **generic** method doNothing() that is public, non-static, returns void, takes an array of type E, and **has an empty body**.

```
public void doNothing(ArrayList<E> array){
}
```

5. (2%) Is the following Java code correct? If not, why not?

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

```
ArrayList<int> list = new ArrayList<>();
```

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6. (2%) Which of the following is **TRUE** about Generics? (a)
- (a) Generic information is **ONLY** available at compile time.
  - (b) Generic information is available at compile time **AND** runtime.
  - (c) Given a generic type E, the following is legal: E data = new E();
  - (d) Given a generic type E, the following is legal: public static E data;
7. (2%) You **CANNOT** write a class that extends Throwable and uses generic types.
- (a) True (a) True
  - (b) False