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④ Method invocation in interface and abstract class
Yes It's technically true that invoking methods via interfaces can be slightly slower than invoking methods in abstract class.

Reason:

(i) Abstract class methods: are resolved using direct method invocation.

(ii) On the other hand, Interface methods are resolved using interface method table (itable) which involves an extra level of indirection, especially in older JVM version.

Code:

```

interface MyInterface {
    void run();
}

abstract class MyAbstract {
    void run();
}

class InterfaceTest implements MyInterface {
    int i=0;
    public void run() {
        i++;
    }
}

class TestAbstract extends MyAbstract {
    int j=0;
    public void run() {
        j++;
    }
}

```


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```
Public class SpeedTest {
```

```
    public static void main (String[] args) {
```

```
        MyInterface i = new InterfaceTest();
```

```
        MyAbstract a = new TestAbstract();
```

```
        long start = System.nanoTime();
```

```
        for (int j=0; j<1000000; j++) {  
            i.num();
```

```
        }
```

```
        long end = System.nanoTime();
```

```
        System.out.println ("Interface Time" + (end - start));
```

```
        start = System.nanoTime();
```

```
        for (int j=0; j<1000000; j++) {  
            a.num();
```

```
        }
```

```
        end = System.nanoTime();
```

```
        System.out.println ("Abstract Time"  
                             + (end - start));
```

```
    }  
}
```