

## The Stack Step By Step

### Start

```
public static void main(String[] args)
{
    int i=1;
```

```
    i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- The stack isn't really empty, other applications are running but as far as this application is concerned there is only an empty stack

 simple java stack

```
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```

### Program starts

```
public static void main(String[] args)
{
    int i=1;
```

```
    i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- main() frame added to stack

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```
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```

### Variable created

```
public static void main(String[] args)
{
    int i=1;
```

```
i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- i variable created in the main() frame



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```

## Method call

```
public static void main(String[] args)
{
    int i=1;
```

```
i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- (Two steps) silly() frame added to stack, locali variable created with a value passed in from main()



```
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```

## Variable set

```
public static void main(String[] args)
{
    int i=1;
```

```
i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- locali value in silly() changed to 3



```
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```

## Value returned

```
public static void main(String[] args)
{
    int i=1;
```

```
    i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- locali value in silly() returned to main() and stored in i

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## silly() exits

```
public static void main(String[] args)
{
    int i=1;
```

```
    i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- silly() frame deleted as method exits

 simple java stack

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## Main finishes and program closes

```
public static void main(String[] args)
{
    int i=1;
```

```
    i = silly(i); }
```

```
int silly(int locali) { locali = 3; return locali; }
```

- main() frame deleted as method exits

 simple java stack

```
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```