WEEK SIX

Acknowledgements: Slides created based off material provided by Dr. Travis Doom

THE METHOD

- Smaller, simpler, subcomponent of a program
- Hides low-level details, making program easier to understand
- Helps promote efficient coding and limit unnecessary repetition
- Methods must be declared/defined
- AKA functions, procedures, subroutines

THE METHOD PARTS

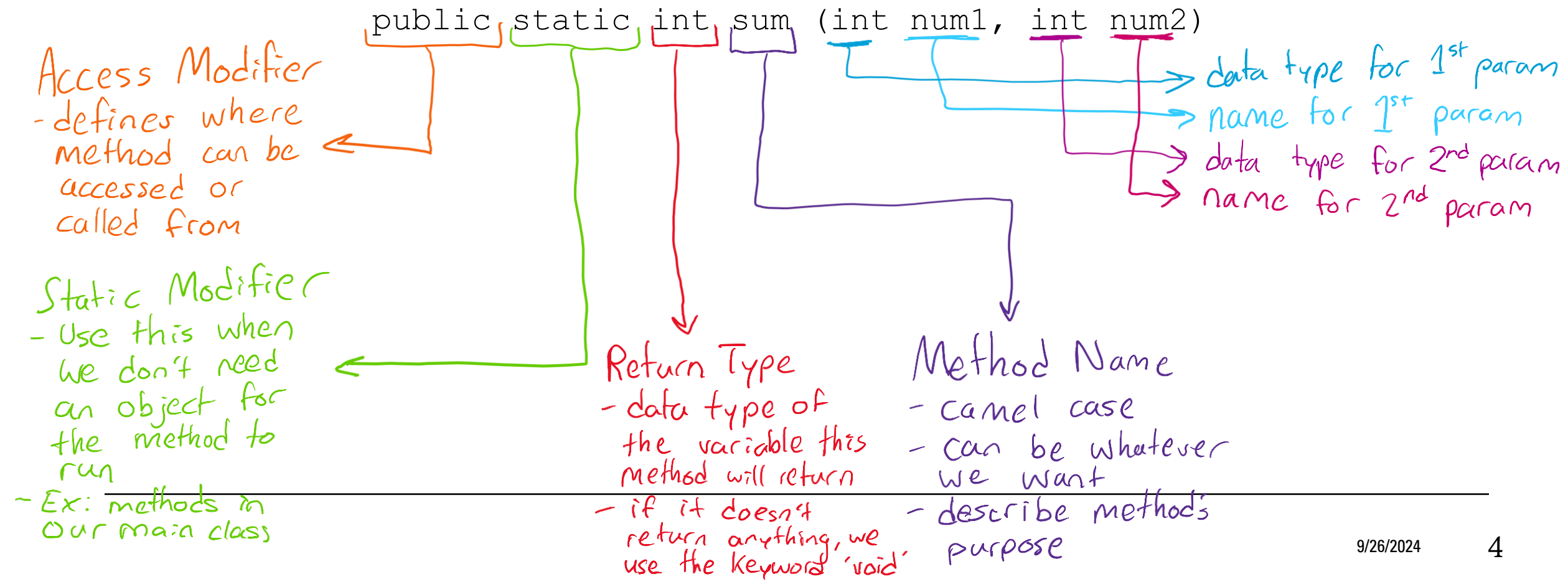
```
public static int sum (int num1, int num2)
public static int sum (int num1, int num2)
{
        int result = num1 + num2;
        return result;
}
totalGrade = sum(grade1, grade2);
```

Method Header

Definition

Method call

METHOD HEADER (DECLARATION)



DEFINITION (METHOD HEADER & BODY)

```
public static int sum (int num1, int num2)
{
        int result = num1 + num2;// method code: takes two integers from the
                                    user and adds them together
        return result;
}
```

method header

- return keyword is used to indicate to the compiler that we want it to go back to the section of code the method was called from
- it also allows us to pass a value back to the main code just like parameters allow us to pass values into the method

* data type of result must match return type in the method header

METHOD CALL

- method call will evaluate to whatever value is being returned
- in this case, the value in result would get stored in totalGrade

```
totalGrade = sum(grade1, grade2);
```

data type of totalGrade must match the return type of the method

We don't have to specify a class/object for the method if we are in the same class as the method

WHAT HAPPENS WHEN WE CALL A METHOD

```
public static void main(String[] args)
{
        int quizOne = 80;
        int midterm = 94;
        int totalGrade = 0;

        totalGrade = sum(quizOne, midterm);

}
```

```
public static int sum (int num1, int num2)
{
        int result = num1 + num2;
        return result;
}
```