

Introduction (1A)

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Function

```
int    math    =90;
int    science =80;
int    history =95;

float  mean    =0.;
```

```
mean = maen(math, science, history);
```

```
float mean (int x, int y, int z)
{
    int    avg;

    avg = (x + y + z) / 3.0;

    return( avg );
}
```

Structure Type

```
struct name {  
    int    math;  
    short  science;  
    char   history;  
};
```

```
typedef struct name SType ;
```

John

```
math = 100;  
science = 95;  
history = 80;
```

Robert

```
math = 100;  
science = 95;  
history = 80;
```

```
SType John ;
```

```
SType Robert ;
```

```
John.math = 100;  
John.science = 95;  
John.history = 80;
```

```
Robert.math = 97;  
Robert.science = 88;  
Robert.history = 85;
```

```
mean(John.math, John.science, John.history);  
mean(Robert.math, Robert.science, Robert.history);
```

Class Type

```
class CType {  
    int    math;  
    short  science;  
    char   history;  
    float  mean();  
};
```

CType

John

;

CType

Robert

;

```
John.math = 100;  
John.science = 95;  
John.history = 80;
```

```
Robert.math = 97;  
Robert.science = 88;  
Robert.history = 85;
```

```
John.mean();
```

```
Robert.mean();
```

Object John

```
math = 100;  
science = 95;  
history = 80;
```

Object Robert

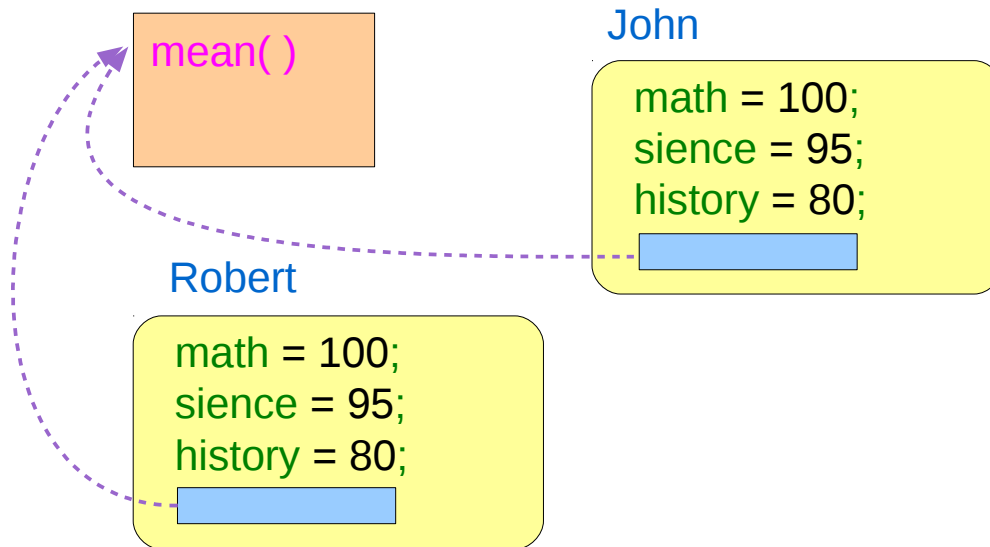
```
math = 100;  
science = 95;  
history = 80;
```

mean()

Member Function

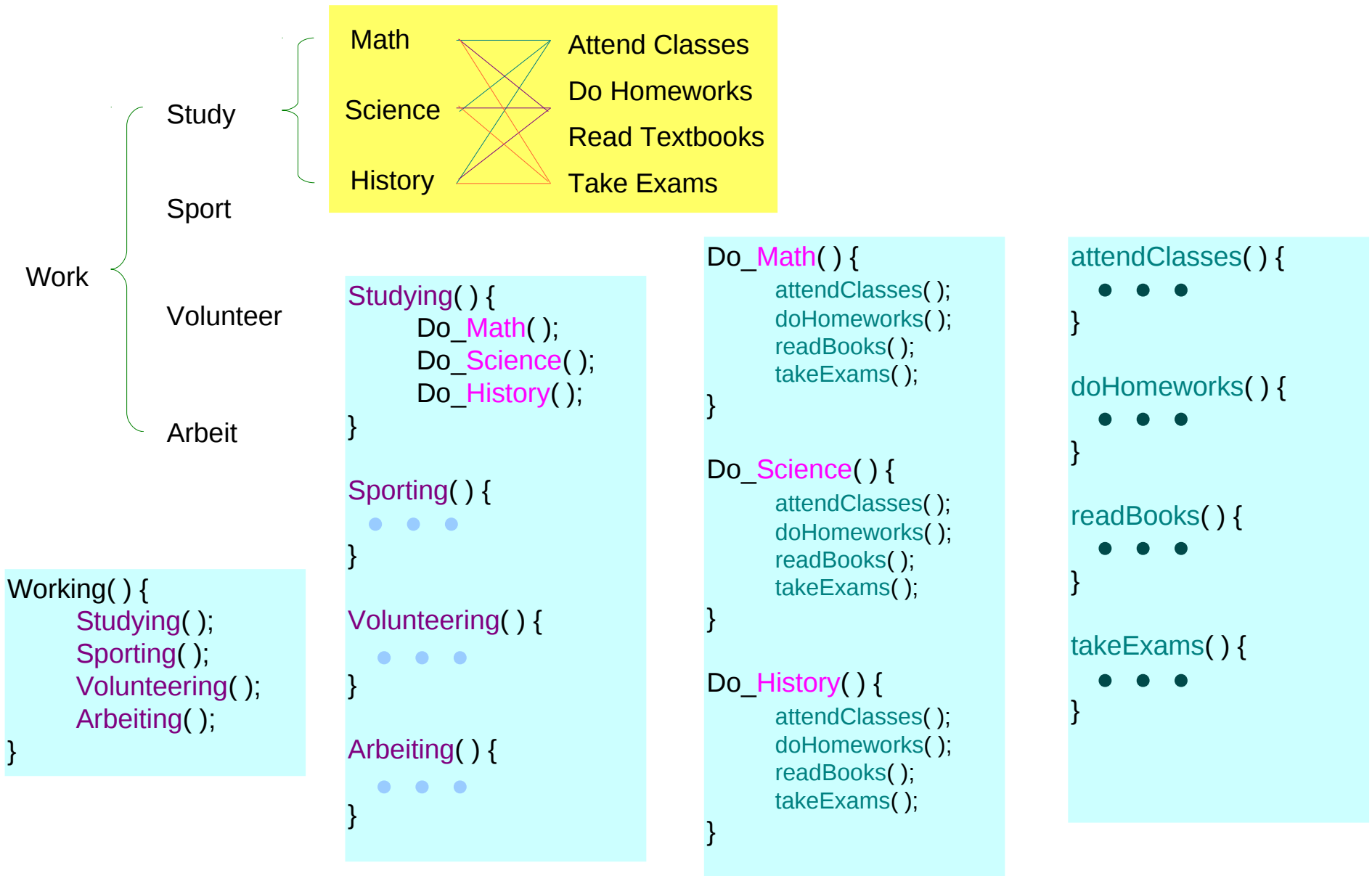
```
class CType {  
    int    math;  
    short  science;  
    char   history;  
    float  mean();  
};
```

```
CType::mean()  
{  
    int    avg;  
    avg = (math + science + history) / 3.;  
    return(avg);  
}
```

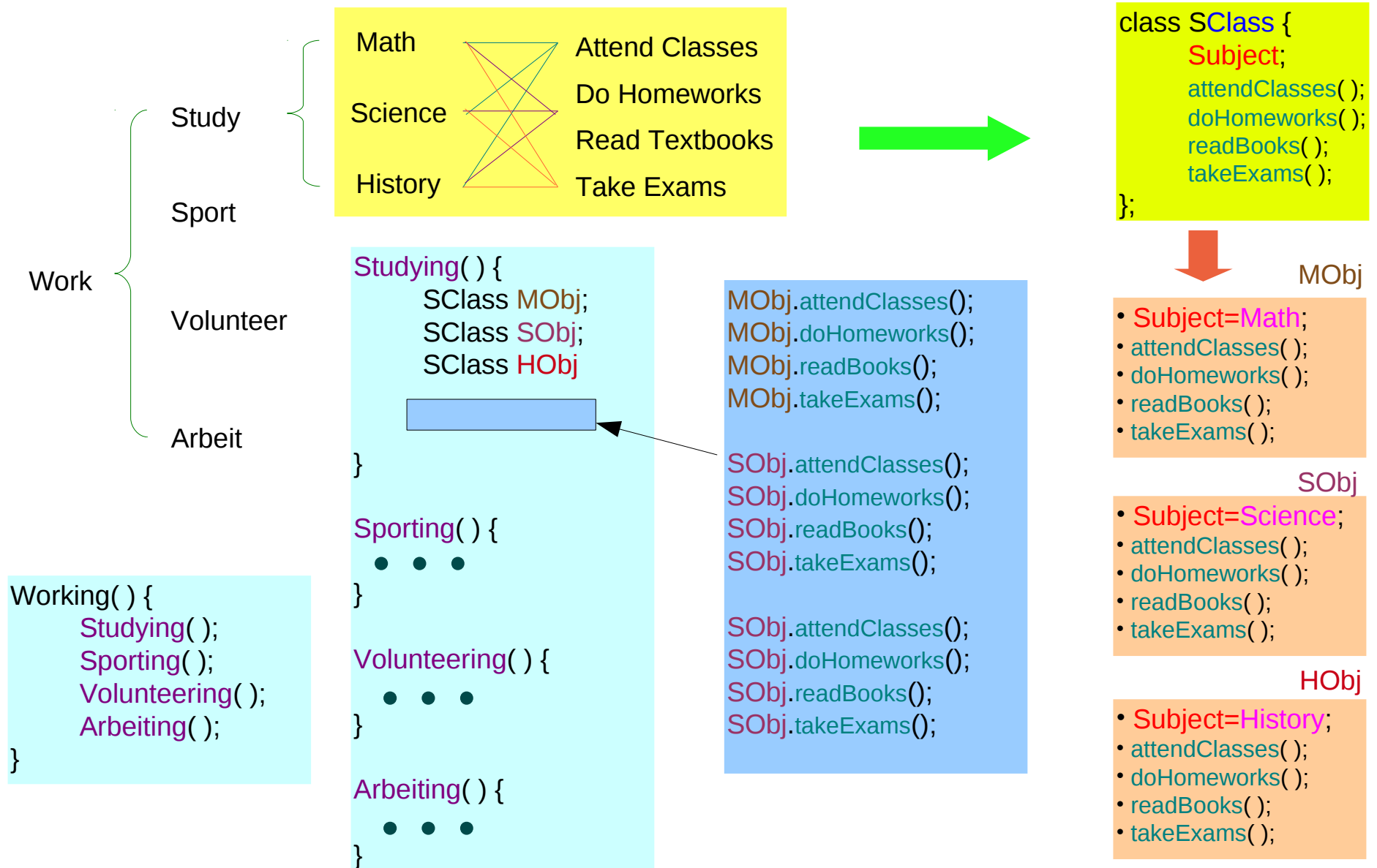


```
John.math = 100;    John.mean();  
John.science = 95;  
John.history = 80;  
  
Robert.math = 97;    Robert.mean();  
Robert.science = 88;  
Robert.history = 85;
```

Divide a Work by Functions



Group Data and Functions



Class Structure

Class Structure

Class Structure

References

- [1] W Savitch, "Absolute C++"
- [2] P.S. Wang, "Standard C++ with objected-oriented programming"