

## 05. Quiz

# Quiz [1-1]

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- **Data**

2 10 20

IQ MS

100 120 110 105 85 95 130 100 105 90

3.0 3.8 3.1 2.9 2.6 2.9 3.6 2.8 3.1 2.4

# Quiz [1-2]

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- Declaration and Prototypes

```
#ifndef DATATYPE
#define DATATYPE

#define SCANFORMAT "%f"
#define PRNFORMAT "%7.3f "

typedef float EType;
#endif

#ifndef MULTIVRAIATE
#define MULTIVRAIATE
typedef struct
{
    int rows;
    int cols;
    char **headers;
    int length;
    EType **elem;
} MultiVariateSet;
#endif
```

# Quiz [1-3]

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- **Declaration and Prototypes**

```
static MultiVariateSet *CreateMultiVariateSet(const char *filename);  
static void DestroyMultiVariateSet(MultiVariateSet *variateSet);  
static void PrintMultiVariateSet(MultiVariateSet *variateSet);  
  
static float ComputeCovariance(MultiVariateSet *variateSet);  
static float ComputeCorrelation(MultiVariateSet *variateSet);
```

# Quiz [1-4]

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- Main

```
int main(int argc, char *argv[])
{
    MultiVariateSet *setVariate = NULL;

    setVariate = CreateMultiVariateSet(PATH_FILE);
    PrintMultiVariateSet(setVariate);
    printf("\n");

    printf("Covariance = %6.3f\n", ComputeCovariance(setVariate));
    printf("Correlation = %6.3f\n", ComputeCorrelation(setVariate));
    printf("\n");

    DestroyMultiVariateSet(setVariate);
    return 0;
}
```

# Quiz [1-5]

- Execution

```
      IQ      MS
-----
100.000    3.000
120.000    3.800
110.000    3.100
105.000    2.900
 85.000    2.600
 95.000    2.900
130.000    3.600
100.000    2.800
105.000    3.100
 90.000    2.400

Covariance =  4.670
Correlation =  0.913

계속하려면 아무 키나 누르십시오 . . .
```