

## Exercise Sheet 7

### Assignment 7.1 Linearization I

Consider the following inheritance expressions: A(B,C) B(E,G) C(D,F) D(G) F(E)  
Give the linearization order for A of the following methods:

1. Leftmost Preorder Depth-First Search with Duplicate Cancelation
2. C3

### Assignment 7.2 Linearization II

Consider the following classes: A(B,C) B(D,E) C(F,G) D(G) E(F)  
Give the linearization order for A of the following methods:

1. LPDFS with Duplicate Cancellation
2. Reverse Postorder Rightmost DFS
3. C3

### Assignment 7.3 (Multiple) Inheritance

1. Consider the following C++-Classes:

```
class A          { public: int a; virtual void f(); }  
class B : public A { public: int b; virtual void f(); }  
class C : public B { public: int c; virtual void f(); }
```

Draw a memory representation diagram for a C-Object, and the virtual table diagram for class C!

2. Consider the following C++-Classes:

```
class A          { public: int a; void f(); }  
class B : public A { public: int b; void f(); }  
class C          { public: int c; void f(); }  
class D : public C, public B { public: int d; void f(); }
```

Draw a memory representation diagram for a D-Object!