Esercizio Cosa Stampa

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class F: public B, public E, public D  {
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B* pb=new B; C* pc = new C; D* pd = new D; E* pe = new E;
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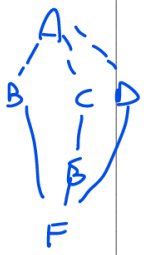

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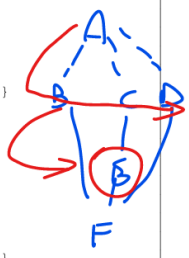

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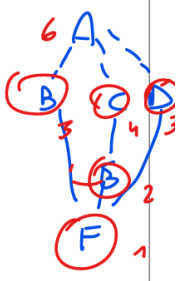


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B* p1 = new E(); B* p2 = new C(); B* p3 = new D(); C* p4 = new E();
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```

```
(dynamic_cast<D&>(p3->n())).g();
```

```
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Si richiamano i seguenti fatti concernenti la libreria di I/O standard.

- `ios` è la classe base astratta e virtuale della gerarchia di tipi della libreria di I/O; la classe `istream` è derivata direttamente e virtualmente da `ios`; la classe `ifstream` è derivata direttamente da `istream`.
- `ios` rende disponibile un metodo costante e non virtuale `bool fail()` con il seguente comportamento: una invocazione `s.fail()` ritorna `true` se e solamente se lo stream `s` è in uno stato di fallimento (cioè, il failbit di `s` vale 1).
- `istream` rende disponibile un metodo non costante e non virtuale `long tellg()` con il seguente comportamento: una invocazione `s.tellg()`:
  1. se `s` è in uno stato di fallimento allora ritorna -1;
  2. altrimenti, cioè se `s` non è in uno stato di fallimento, ritorna la posizione della testina di input di `s`.
- `ifstream` rende disponibile un metodo costante e non virtuale `bool is_open()` con il seguente comportamento: una invocazione `s.is_open()` ritorna `true` se e solo se il file associato allo stream `s` è aperto.

Definire una funzione `long Fun(const ios&)` con il seguente comportamento: una invocazione `Fun(s)`:

(1) se `s` è in uno stato di fallimento lancia una eccezione di tipo `Fallimento`, dove la classe `Fallimento` va esplicitamente definita;

(2) se `s` non è in uno stato di fallimento allora:
   (a) se `s` non è un `ifstream` ritorna -2;
   (b) se `s` è un `ifstream` ed il file associato non è aperto ritorna -1;
   (c) se `s` è un `ifstream` ed il file associato è aperto ritorna la posizione della cella corrente di input di `s`.

SOLUZIONE

```
(c) IFSTREAM i* = DYNAMIC_CAST<IFSTREAM&>(s);
IF (!i) RETURN -2;
IF (i && !i->ISOPEN()) RETURN -1;
IF (i && i->ISOPEN()) i->TELLG();
```

Grazie Ramzy!

(cucciolo...)