```
class A {
public:
  virtual void m() =0;
};

class B: virtual public A {};

class C: virtual public A {
public:
  virtual void m() {}
};

class D: public B, public C {
public:
  virtual void m() {}
};

class E: public D {};

class F: public E {};

char G(A* p, B& r) {
  C* pc = dynamic_cast<E*>(&r);
  if(pc && typeid(*p)==typeid(r)) return 'G';
  if(!dynamic_cast<E*>(&r) && dynamic_cast<D*>(p)) return 'Z';
  if(!dynamic_cast<F*>(pc)) return 'A';
  else if(typeid(*p)==typeid(E)) return 'S';
  return 'E';
}
```

(SAGGEZZA)

→ S (x1) = G(B, F)

→ A (x 2) ← G (A, B) / G(C, D)

→ G(x 2) ( G(B,B) G(F, B)

→ B (x 1) → G(A, B)

→ Z(x2) ( G(D, B) G(D, D)

Si consideri inoltre il seguente statement.

```
cout << G(new X1,*new Y1) << G(new X2,*new Y2) << G(new X3,*new Y3) << G(new X4,*new Y4)
     << G(new X5,*new Y5) << G(new X6,*new Y6) << G(new X7,*new Y7) << G(new X8,*new Y8);
```

Definire opportunamente le incognite di tipo `Xi` e `Yi` tra i tipi `A`, `B`, `C`, `D`, `E`, `F` della precedente gerarchia in modo tale che:

1. Lo statement non includa piú di una chiamata della funzione `G` con gli stessi parametri attuali
2. La compilazione dello statement non produca illegalità
3. L'esecuzione dello statement non provochi errori a run-time
4. L'esecuzione dello statement produca in output esattamente la stampa **SAGGEZZA**.

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}
```

R. != B

C ≤ F

P == S

P != D

(SAGGEZZA)

→ S (x1) = G(B, F)

→ A (x 2)

→ G (x 2)

→ B (x 1)

→ Z (x 2)

```
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R. != S

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R. != F

(SAGGEZZA)

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```

(SAGGGZZA)

→ S (x1) = G(B, F)

→ A (x 2)

→ G (x 2)

→ B (x 1)

→ Z (x 2)

R != B

C ≤ F

P = B

P != 0

```
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(SAGGGZZA)

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→ A (x 2) = G (A, B) / G(C, D)

→ G (x 2) ( G(B, B) / G(F, B) )

→ B (x 1)

→ Z (x 2)

B V

CONST B V

(r == B)