A *feature diagram* is a graphical representation of a feature model [23]. It is a tree where primitive features are leaves and compound features are interior nodes. Common graphical notations are depicted in Figure 1.
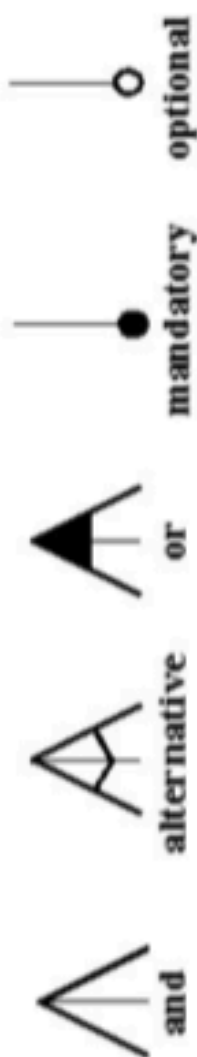
Figure 2a is a feature diagram. It defines a product-line where each application contains two features **r** and **s**, where **r** is an alternative feature: only one of **G, H,** and **I** can be present in an application. **s** is a compound feature that consists of mandatory features **A** and **C**, and optional feature **B**.
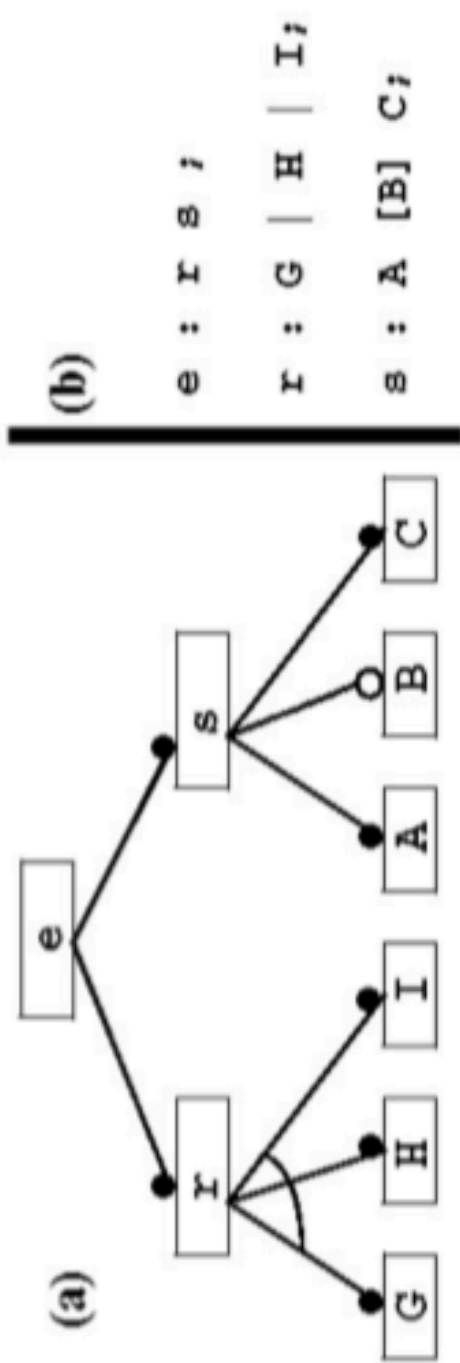


**Fig. 1.** Feature Diagram Notations



(a)

(b)

```
e : r s ;
r : G | H | I ;
s : A [B] C ;
```

**Fig. 2.** A Feature Diagram and its Grammar