

```
let map : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] = • in
map⋆(string_of_int)([1,2,3,4,5])
```

EXP ? Variable reference : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] with X as Int , Y as String

Fig. 1: Hypothetical behavior: when a type application insertion succeeds, the type arguments are listed along with the type of the polymorphic term. An ellipsis mark indicates folded code and provides a way to examine it.

```
let map : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] = • in
map @<Int>@<String> (string_of_int)([1,2,3,4,5])
```

Automatically inserted type application

Fig. 2: Hypothetical behavior: when the ellipsis mark is selected, it expands to reveal the explicit type applications and arguments that have been inserted by the editor. If this code is edited by the user, it becomes fully explicit and is colored accordingly.

```
let map : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] = • in
map⋆(string_of_int)([true, false])
```

EXP ? Variable reference : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] with X unsolved , Y as String

Fig. 3: Hypothetical behavior: when a type application insertion fails, the conflicted type arguments are indicated. The ellipsis mark signals an error.

```
let map : forall X -> forall Y -> (X -> Y) -> [X] -> [Y] = • in
map @<!>@<String> (string_of_int)([true, false])
```

TYP ? conflicting constraints Bool Int

Fig. 4: Hypothetical behavior: the editor displays the conflicting required refinements of the unfillable type argument hole. If the user hovers over or selects one of the refinements, it will be applied to the hole, resulting in errors elsewhere in the code.