



```
DECLARE alpha REAL[2]
```

```
H 0
```

```
H 1
```

```
CNOT 0 1
```

```
RZ(alpha[0]) 1
```

```
CNOT 0 1
```

```
H 1
```

```
H 0
```

```
CNOT 1 0
```

```
RZ(alpha[1]) 0
```

```
CNOT 1 0
```

```
H 0
```

```
H 1
```

```
DECLARE ro BIT[2]
```

```
MEASURE 0 ro[0]
```

```
MEASURE 1 ro[1]
```