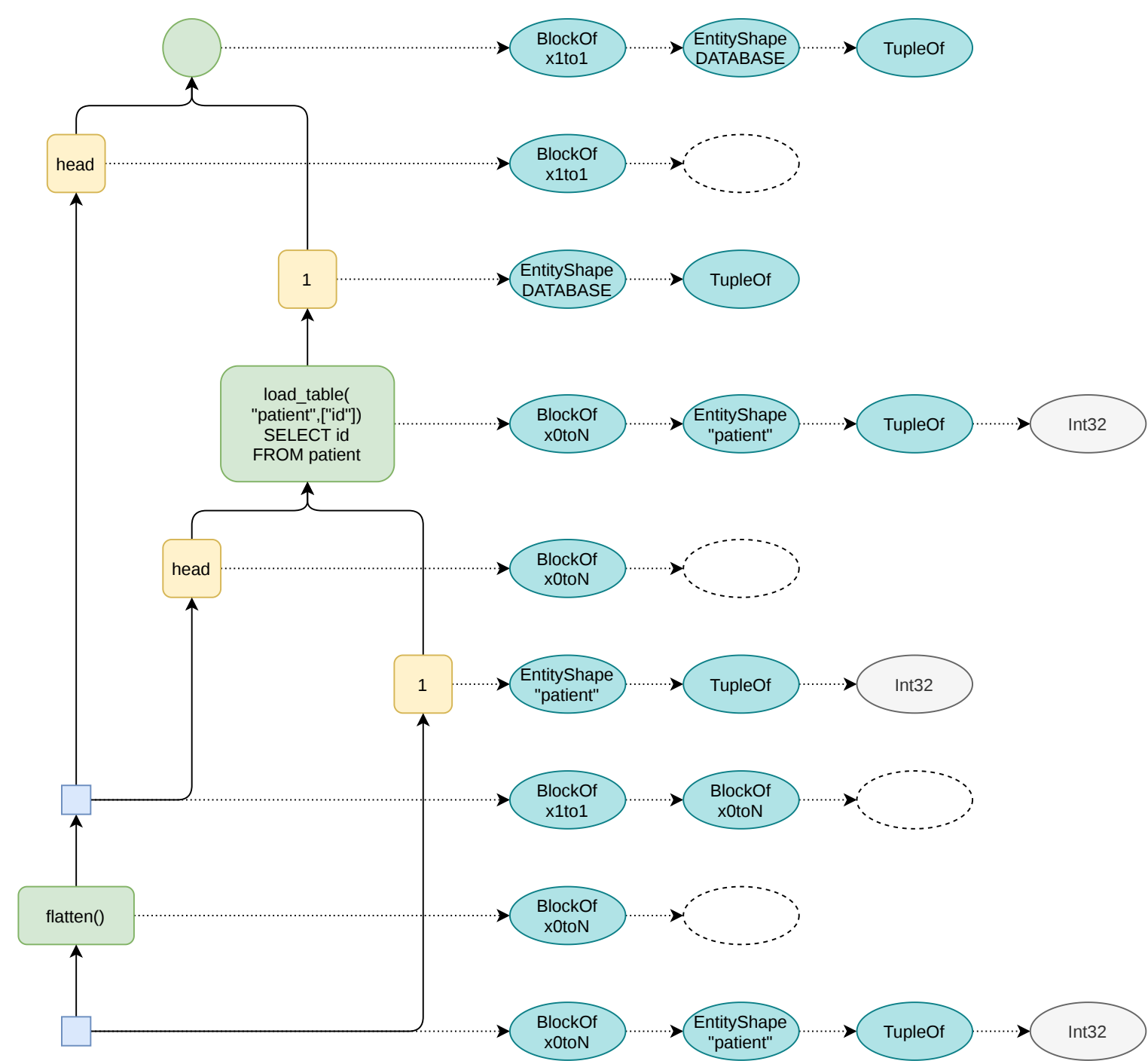


```
chain_of(
  with_elements(load_postgres_table(("public", "patient"), ["id"], [Int32])),
  flatten())
```



```
chain_of(with_elements(load_postgres_table(("public", "patient"), ["id"], [Int32])),
  flatten(),
  with_elements(
    chain_of(
      load_postgres_table(("public", "patient"), ["mrn"], [String], ["id"]),
      block_cardinality(x1to1))),
  flatten()),
  with_elements(
    chain_of(
      output(),
      column(1))))
```









The diagram illustrates a neural network architecture for SQL query generation, showing a sequence of operations and their corresponding symbolic representations.

Operations (Left Side):

- Input:** A sequence of tokens (represented by blue squares) is processed by an **embed()** layer (green rectangle).
- Flattening:** The embedded sequence is flattened (**flatten()**, green rectangle).
- Cardinality:** The flattened sequence is processed by a **cardinality()** layer (green rectangle).
- Column Selection:** A **column()** layer (green rectangle) is applied to the output of the cardinality layer.
- Output:** The final output is generated by an **output()** layer (green rectangle).

Symbolic Representations (Right Side):

- BlockOf:** Represented by blue ovals (e.g., **BlockOf x1to1**, **BlockOf x0toN**).
- EntityShape:** Represented by blue ovals (e.g., **EntityShape DATABASE**, **EntityShape "patient"**).
- TupleOf:** Represented by blue ovals (e.g., **TupleOf**, **TupleOf "patient"**).
- Int32:** Represented by grey ovals (e.g., **Int32**).
- String:** Represented by grey ovals (e.g., **String**).

Connections:

- Dotted lines connect the operations to their corresponding symbolic representations.
- Solid lines show the flow of data through the network layers.
- Numbers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100) are placed near the connections to indicate the sequence of operations.







