DM : 3D Geometry: Half-edge data structure

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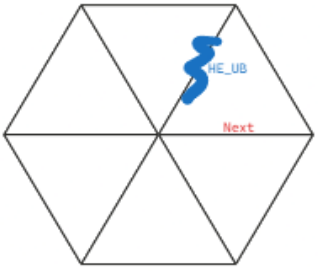
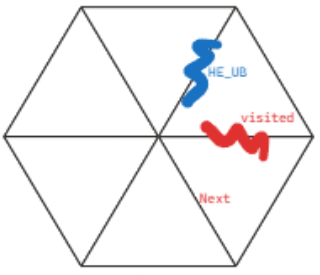
Propose an algorithm for traveling around the vertex using the half-edges. You can only use operations such as: `next`, `twin` `previous`.

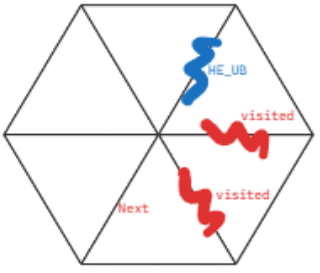
Provide an illustration for each step of the algorithm

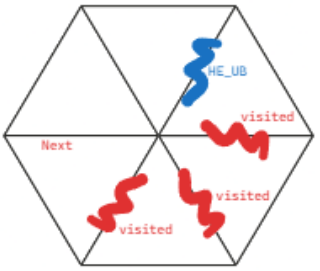
Python code :

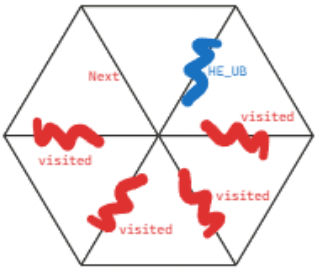
```
class HalfEdge:
    def __init__(self):
        self.twin = None
        self.next = None
        self.visited = False

# Function for traversing all the half-edges
# around the UB vertex
def traveling_half_edges(HE_UB):
    # Mark HE_UB as not visited
    HE_UB.visited = False
    HE_actuelle = HE_UB

    while True:
        # Find the next unvisited half-ridge
        HE_suivante = HE_actuelle.next
        while HE_suivante.visited:
            HE_suivante = HE_suivante.twin.next

        # If the next half-edge is HE_UB
        # the route is completed.
        if HE_suivante == HE_UB:
            break

        # Mark the current half-edge as visited
        HE_actuelle = HE_suivante
        HE_actuelle.visited = True



# HE_UB = ... (initialise your starting half-edge here)
# traveling_half_edges(HE_UB)
```

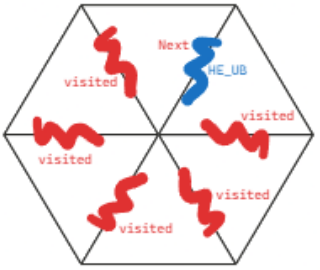







HE_UB
visited
Next
visited
visited


Next
HE_UB
visited
visited
visited
visited


Next
HE_UB
visited
visited
visited
visited
visited