Chương 1.

Counting Sort

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Input  = [74, 12, 217, 36, 61, 77, 286, 153, 337, 121]
Count  = ["filled with 0"]
Result = []

# Step 1: Count the frequency of the input
Count[12]  := 1
Count[36]  := 1
Count[61]  := 1
Count[74]  := 1
Count[77]  := 1
Count[121] := 1
Count[153] := 1
Count[217] := 1
Count[286] := 1
Count[337] := 1

# Step 2: Process the frequency to get the appropriate position
Count[12]  := 1
Count[36]  := 2
Count[61]  := 3
Count[74]  := 4
Count[77]  := 5
Count[121] := 6
Count[153] := 7
Count[217] := 8
Count[286] := 9
Count[337] := 10

# Step 3: Construct the result
i = 0:
    Result[Count[Input[0]] - 1] = Input[0]
    Result[Count[74] - 1] = 74
    Result[3] = 74
    Count[74] = 3

i = 1:
    Result[Count[Input[1]] - 1] = Input[1]
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    Result[Count[12] − 1] = 12
    Result[0] = 12
    Count[12] = 0

i = 2:
    Result[Count[Input[2]] − 1] = Input[2]
    Result[Count[217] − 1] = 217
    Result[7] = 217
    Count[217] = 7

i = 3:
    Result[Count[Input[3]] − 1] = Input[3]
    Result[Count[36] − 1] = 36
    Result[1] = 36
    Count[36] = 1

i = 4:
    Result[Count[Input[4]] − 1] = Input[4]
    Result[Count[61] − 1] = 61
    Result[2] = 61
    Count[61] = 2

i = 5:
    Result[Count[Input[5]] − 1] = Input[5]
    Result[Count[77] − 1] = 77
    Result[4] = 77
    Count[77] = 4

i = 6:
    Result[Count[Input[6]] − 1] = Input[6]
    Result[Count[286] − 1] = 286
    Result[8] = 286
    Count[286] = 8

i = 7:
    Result[Count[Input[7]] − 1] = Input[7]
    Result[Count[153] − 1] = 153
    Result[6] = 153
    Count[153] = 6

i = 8:
    Result[Count[Input[8]] − 1] = Input[8]
    Result[Count[337] − 1] = 337
    Result[9] = 337
    Count[337] = 9
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i = 9:
    Result[Count[Input[9]] − 1] = Input[9]
    Result[Count[121] − 1] = 121
    Result[5] = 121
    Count[121] = 5

Result: [12, 36, 61, 74, 77, 121, 153, 217, 286, 337]
```