

Output 2024229

The screenshot shows a VS Code editor window titled "2024229_3.cpp - C++". The Explorer panel on the left shows a project structure with folders for "OPEN EDITORS", "C++", and "CS221 Assignments". The "2024229_3.cpp" file is selected. The Output panel on the right shows the execution output of the program. The program is a C++ implementation of a sorting algorithm using three holding tracks (H1, H2, H3) and an output track. It takes input from the user for the number of cars (n) and the number of holding tracks (k). The output shows the sequence of moves and the final output sequence.

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cd "/Users/hassan/Library/CloudStorage/OneDrive-HigherEducationCommission/C++/CS221 Assignments/" && g++ 2024229_3.cpp -o 2024229_3 && "/U
sers/hassan/Library/CloudStorage/OneDrive-HigherEducationCommission/C++/CS221 Assignments/"2024229_3
Matching Java Virtual Machines (1):
21.0.4 (arm64) "Oracle Corporation" - "Java SE 21.0.4" /Library/Java/JavaVirtualMachines/jdk-21.jdk/Contents/Home
(base) hassan@Hassans-MacBook-Air C++ % cd "/Users/hassan/Library/CloudStorage/OneDrive-HigherEducationCommission/C++/CS221 Assignments/"
&& g++ 2024229_3.cpp -o 2024229_3 && "/Users/hassan/Library/CloudStorage/OneDrive-HigherEducationCommission/C++/CS221 Assignments/"2024229
3
Enter number of cars (n): 9
Enter number of holding tracks (k): 3

Enter the order of 9 cars (each between 1 and 9) from left to right :
(Enter from left to right as seen on screen, where rightmost car is processed first)
Car 1: 5
Car 2: 8
Car 3: 1
Car 4: 7
Car 5: 4
Car 6: 2
Car 7: 1
Repetition not allowed. Enter a different number.
Car 7: 9
Car 8: 6
Car 9: 3
Cars from left to right: 5 8 1 7 4 2 9 6 3

Move car 3 from Input -> Holding Track 1.

Current state of holding tracks:
H1 : 3
H2 : empty
H3 : empty

Move car 6 from Input -> Holding Track 2.

Current state of holding tracks:
H1 : 3
H2 : 6
H3 : empty

Move car 9 from Input -> Holding Track 3.

Current state of holding tracks:
H1 : 3
H2 : 6
H3 : 9

Move car 2 from Input -> Holding Track 1.

Current state of holding tracks:
H1 : 3 2
H2 : 6
H3 : 9

Move car 4 from Input -> Holding Track 2.

Current state of holding tracks:
H1 : 3 2
H2 : 6 4
H3 : 9

Move car 7 from Input -> Holding Track 3.

Current state of holding tracks:
H1 : 3 2
H2 : 6 4
H3 : 9 7

Move car 1 from Input -> Output Track.
Move car 2 from Holding Track 1 -> Output Track.
Move car 3 from Holding Track 1 -> Output Track.
Move car 4 from Holding Track 2 -> Output Track.

Current state of holding tracks:
H1 : empty
H2 : 6
H3 : 9 7

Move car 8 from Input -> Holding Track 1.

Current state of holding tracks:
H1 : 8
H2 : 6
H3 : 9 7

Move car 5 from Input -> Output Track.
Move car 6 from Holding Track 2 -> Output Track.
Move car 7 from Holding Track 3 -> Output Track.
Move car 8 from Holding Track 1 -> Output Track.
Move car 9 from Holding Track 3 -> Output Track.

Current state of holding tracks:
H1 : empty
H2 : empty
H3 : empty

Final Output Sequence : 9 8 7 6 5 4 3 2 1
(base) hassan@Hassans-MacBook-Air CS221 Assignments %
```

Move car 7 from Input -> Holding Track 3.

Current state of holding tracks:

H1 : 3 2
H2 : 6 4
H3 : 9 7

Move car 1 from Input -> Output Track.

Move car 2 from Holding Track 1 -> Output Track.

Move car 3 from Holding Track 1 -> Output Track.

Move car 4 from Holding Track 2 -> Output Track.

Current state of holding tracks:

H1 : empty
H2 : 6
H3 : 9 7

Move car 8 from Input -> Holding Track 1.

Current state of holding tracks:

H1 : 8
H2 : 6
H3 : 9 7

Move car 5 from Input -> Output Track.

Move car 6 from Holding Track 2 -> Output Track.

Move car 7 from Holding Track 3 -> Output Track.

Move car 8 from Holding Track 1 -> Output Track.

Move car 9 from Holding Track 3 -> Output Track.

Current state of holding tracks:

H1 : empty
H2 : empty
H3 : empty

Final Output Sequence : 9 8 7 6 5 4 3 2 1

(base) hassan@Hassans-MacBook-Air CS221 Assignments %

