A vent has position, opening, airflow and kValue. Opening is integer between 0..100%. Vent has **exactly 50** positions it can go to, so if position is 25 opening is 50% and if position is 50 opening is 100%. kValue is 1.152 if Vent type is Vent\_100 and 1.454 if vent type is Vent\_125. Airflow depends on opening and KValue and is Airflow = kValue \* opening.

Make a program that reads vents from text file. Each line in file has vent ID, vent type (Vent\_100 or Vent\_125), start position (0..100) and target airflow. Maximum number of vents in a file is 200.

Example Input file:

ID type position target\_airflow

AA0101201 Vent\_100 50 100.5

AA0101210 Vent\_125 45 90.3

AA0101202 Vent\_100 20 40.5

.

.

.

Program writes output file where each line has vent ID, vent type (Vent\_100 or Vent\_125), start\_airflow (the aiflow that vent was on at the beginning), end\_position and end\_airflow

Vents are ordered by the airflow that they were in at starting position

Example Output file:

ID type start\_airflow end\_position end airflow

AA0101210 Vent\_125 130.86 31 90.15

AA0101201 Vent\_100 115.20 44 101.38

AA0101202 Vent\_100 46.08 18 41.47

.

.

.