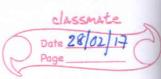


For passed to steream operations are generally side-effect free and its a good principle to document what side effects we are willing to classmate Date 17/62/17 accept from for passed as parameters, and none is the First class for can be used like other values - combe used passed as argumen neturned as results, and stored in data structures. Cerrying Any kind of unit conversion can be generalized as 1) Multiply by the consersion factor (f) 2) Adjust the baseline if relevant. (b) Supplying found b to convert each value in a smilar manner (km smil would be too teding Double Unary Operator convert CtoF = curried Converter (9.0 f, 32); convert USDtoGBP zweried Convertes (0.6,0); Convert knots Mi= coveried Convertes (0,6214,0); it contains double gop = convert USD to GB P & apply As Double (1000); a method applyAsDouble static Double Unary Operator curviellonverter (double f, double d) { return (double 2) -> x + f + b; double gbp = convert USD to GBP. apply As Double (1000); Carrying is a technique where a function of of 2 arguments (x and y, say) is seen instead as a for g of one argument that returns a for also of one argument. The value returned by the latter to is the same as the value of the original for, fbe, y) = (g(x))(y) When some but not all arguments are passed, the fo is said to be partiall public void composition () & Function (Integer, Integer) times 2 = (a) > a + 2; Jacob method Function (Integer, Integer) compared 2 add 3. compare (Times 2 5.0.p (composed A. apply(3)); add3. compase (a + a *2) 5.0.p (composed B. apply(2)); => (0) - 0 1 (0) - 0 +2 p. 8. v, main (1-1) 3 a > \$ 3+ 6+2 (x,y,2) + 5 new Carrying () - comparition () スナオウマウグ



PARALLEL STREAMS a difficult to divide and execute in parallel Sum of first on natural numbers :public static long segum (long n) } neturn Stream. iterate (IL, i > i+1) · limit (n) . parallel () · neduce (OL, Long: 'Sum); 3 Stream : paleallel () > uses Fork Join Pool that by default uses as many threads

filter (.) as there are processors >

Runting, get Runtime (), mailable Processors ()

segmential () · segnential () . map (...) Last call wins in and is applied to the pipeline globally public static long Hum (long m) & inwarks with primitive numbers that cambe return Long Stream, range Closed (1, m) split into independent chunks . porallel(). reduce(oL, Long: : Sum); parallel execution may not gnarantee carrect result if applied on for 8 mit having side-effects (mutable states). min in committee find First (...) are difficult to 11 to but find Any () gives better performance. Data structiones like Array List splits more efficiently than Linked List. Fark | Join framework can be used where the system can decide to necurrively fork unless the task is small enough. Finally, all the tasks are joined after computing the results. static long factorial Recursive (long n) {
noturn n== 171: n * factorial Recursive (n-1); Static long factorial Helper (long acc, long n) {

neturn n = 17 acc: factorial Helper (acc +n, n-1);
} static long factorial Streams (ong m) {

4 months that return Long Stream. transcelosed (1, n). reduce (1, (long a, long b) > a*b)