Pares e Ímpares

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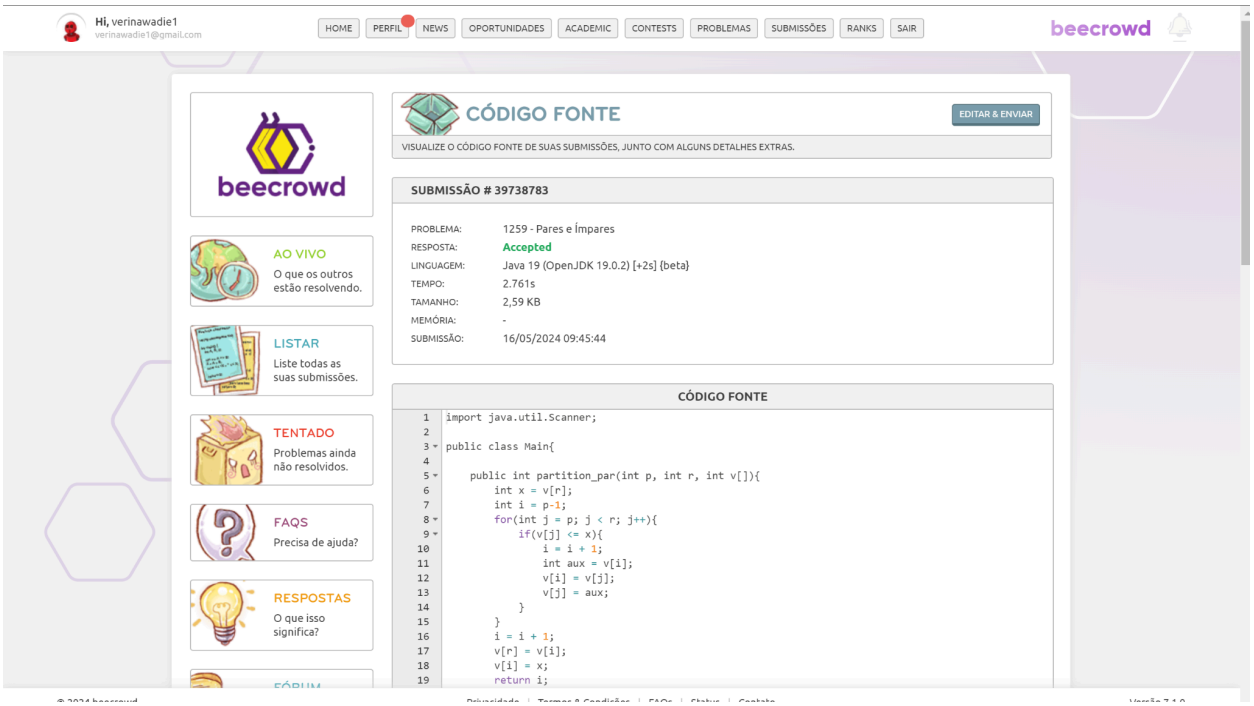


```java
import java.util.Scanner;

public class Bee{

    public int partition_par(int p, int r, int v[]){
        int x = v[r];
        int i = p-1;
        for(int j = p; j < r; j++){
            if(v[j] <= x){
                i = i + 1;
                int aux = v[i];
                v[i] = v[j];
                v[j] = aux;
            }
        }
        i = i + 1;
        v[r] = v[i];
        v[i] = x;
        return i;
    }
```

```java
public void quicksort_par(int p, int r, int v[]){
    if(p < r){
        int q = partition_par(p, r, v);
        quicksort_par(p, q - 1, v);
        quicksort_par(q + 1, r, v);
    }
}

public int partition_impar(int p, int r, int v[]){
    int x = v[r];
    int i = p-1;
    for(int j = p; j < r; j++){
        if(v[j] >= x){
            i = i + 1;
            int aux = v[i];
            v[i] = v[j];
            v[j] = aux;
        }
    }
    i = i + 1;
    v[r] = v[i];
    v[i] = x;
    return i;
}

public void quicksort_impar(int p, int r, int v[]){
    if(p < r){
        int q = partition_impar(p, r, v);
        quicksort_impar(p, q - 1, v);
        quicksort_impar(q + 1, r, v);
    }
}

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    int N = sc.nextInt();
    int[] vetor = new int[N];
    int cont_par = 0;
    int cont_impar = 0;

    for(int i = 0; i < N; i++){
        vetor[i] = sc.nextInt();
```

```
            if(vetor[i] % 2 == 0){
                cont_par++;
            }else{
                cont_impar++;
            }
        }

        int[] vetor_par = new int[cont_par];
        int[] vetor_impar = new int[cont_impar];

        int index_par = 0;
        int index_impar = 0;

        for(int i = 0; i < N; i++){
            if (vetor[i] % 2 == 0 ){
                vetor_par[index_par++] = vetor[i];

            }
        }

        Bee bee = new Bee();
        bee.quicksort_par(0, index_par - 1, vetor_par);


        for(int i = 0; i < N; i++){
            if (vetor[i] % 2 == 1 ){
                vetor_impar[index_impar++] = vetor[i];
            }
        }

        bee.quicksort_impar(0, index_impar - 1, vetor_impar);


         for(int i = 0; i < cont_par; i++){

             System.out.println(vetor_par[i]);
         }

         for(int i = 0; i < cont_impar; i++){
             System.out.println(vetor_impar[i]);
         }
    }
}
```