Laboratory practice 3: Linked List and Arraylist

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1) Project questions Simulation

1.a. Text exercise

i.

```
public static String pc(String str){
      ArrayList<String> list = new ArrayList<>(); //C1
      boolean start= true; // C2
      int index=0;  //C3
      String newString=""; //C4
      for(int i=0;i<str.length()-1;i++){ //C5*n
          if(str.substring(i,i+1).equals("[")){ //C6*(n-1)
              start=true;//C7*(n-1)
              index=0;//C8*(n-1)
          }
          else if(str.substring(i,i+1).equals("]")){ //C9*(n-1)
              start=false; //C10*(n-1)
          }else if(!str.substring(i,i+1).equals("[") //C11*(n-1)
          && !str.substring(i,i+1).equals("]")){ //C12*(n-1)
              if(start){ //C13*(n-1)
                  list.add(index,str.substring(i,i+1)); //C14*(n-1)*n
                  index++; //C15*(n-1)
              }else{//C16*(n-1)
                  list.add(str.substring(i,i+1));//C17*(n-1)
              }
          }
      }

      for(int i=0;i<list.size();i++){ //C18*n
```

```
            newString= newString+list.get(i);//C19*(n-1)
        }

        return newString; //C20
    }
```

1.b. Calculate the complexity of the online exercises

1.c. Explain what the variable n means in the previous exercises

1.d. What did you learn about Stack Overflow? Why does this happen?

1.e. What is the greatest number you could get with the Fibonnacci

1.f. What can you do to calculate bigger Fibonacci 's values?

1.g. What do you conclude about the complexity of CodingBat's

2) Midterm Simulation

3) Recommended reading

3.a. Summary

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