CS 251 Outlab 10 : Beamer, TikZ & Doxygen

Please refer to the general instructions and submission guidelines at the end of this document before submitting.

q1 - Beamer (35 Marks)

Check the resources for files. We've given you the boilerplate code. You need to replicate `Outlab10_ssl2019.pdf`. For that, you will need to include an image (`type-lattice.pdf`). Write everything in a file called **`Beamer.tex`** and submit it along with the corresponding PDF (**`Beamer.pdf`**).

---

q2 - TikZ (30 Marks)

You have been given three files:

- `example.pdf`
- `example.tex`
- `target.pdf`

You need to create a diagram similar to `target.pdf` using `TikZ`. Submit two files: **`diagram.tex`** and **`diagram.pdf`**

---

q3 - Doxygen (35 Marks)

Submission format has been updated, please submit accordingly.

In this question, you will use Doxygen, which is used for generating documentation of a program. In order to generate the output, you have to follow some rules while writing comments in your program.

PartA) HTML Documentation (15 Marks)

You have been provided with two 'cpp' files in the '`outlab10-resources/Doxygen/PartA`'. You must go through their code and understand what it is trying to do. As you are going along, keep adding comments. These comments will finally create the output in the form of documentation of the code. Add comments for all the relevant modules, functions and variables. Use your judgment. The end result will be documentation for a third person, so he/she should be able to understand the program just by reading your documentation output.

Generate the HTML documentation for both the codes and submit the complete HTML folders appropriately with the correct folder names as specified in the submission format.
~~Name the documentations as "`array.html`" & "`stud_rec.html`" for respective programs while submitting.~~

PartB) PDF Documentation (20 Marks)

In this question, you have to produce documentation of a java program and a python program provided in '`outlab10-resources/Doxygen/PartB`'. You must go through both the programs and execute them (if necessary). Comment all the relevant portions and produce the documentation.

For both the programs, documentation should be in '`pdf`' format named '`LinkList.pdf`' and '`python_problem.pdf`'. (NOT IN HTML)
(Do not delete the file named '`data`', which has been provided. It is an input file for the python program '`python_problem.py`')

General Instructions

- Make sure you know what you write, you might be asked to explain your code at a later point in time.
- The submission will be graded automatically, so stick to the naming conventions strictly.
- The deadline for this lab is **Thursday, 7th November 2019** at **1:55 AM**.

Submission Instructions

After creating your directory, package it into a tarball
`outlab10-<team_name>.tar.gz`
Submit once only per team from the moodle account of the smallest roll number.
The directory structure should be as follows (nothing more nothing less)

outlab10-<team_name>/
├── **q1**
│ ├── Beamer.tex
│ └── Beamer.pdf
├── **q2**
│ ├── diagram.tex
│ └── diagram.pdf
└── **q3**
 ├── **array/** (renamed HTML **folder** generated by Doxygen for array.cpp + array.cpp)
 │ ├── array.cpp
 │ ├── index.html
 │ └── ...
 ├── **stud_rec/** (renamed HTML **folder** generated by Doxygen for stud_rec.cpp + stud_rec.cpp)
 │ ├── stud_rec.cpp
 │ ├── index.html
 │ └── ...
 ├── **LinkList/** (renamed Latex **folder** generated by Doxygen for LinkList.java + the PDF + LinkList.java)
 │ ├── LinkList.java
 │ ├── LinkList.pdf
 │ ├── refman.tex
 │ └── ...
 └── **python_problem/** (renamed Latex **folder** generated by Doxygen for python_problem.py + the PDF + python_problem.py)
 ├── python_problem.py
 ├── python_problem.pdf
 ├── refman.tex
 └── ...