The University of New South Wales
COMP9315 DBMS Implementation
22T1 Final Exam

[Instructions] [PostgreSQL] [C] [Q1-3 Info]
[Q1] [Q2] [Q3] **[Q4]** [Q5] [Q6] [Q7] [Q8]

Question 4 (6 marks)

Consider the SQL table definition:

```
create table Tab (
    id      integer,
    code    char(8),
    avg     real,
    primary key(id)
);
```

Assume that:

- `integer` values are 4 bytes long
- `real` values are 8 bytes long
- `char(X)` values occupy x bytes
- each tuple has a 4-byte header before the data
- pages are are B = 4KB in size
- each page has a 96-byte header; the rest of the page holds tuples
- there are r = 10000 tuples in the `Tab` table

Calculate the following:

a. R = the size of each tuple (in bytes)

b. c = the number of tuples in each page

c. b = the total number of pages needed to store `Tab` tuples

State all assumptions. Show all working.

Instructions:

- Type your answer to this question into the file called `q4.txt`
- Submit via: **give cs9315 exam_q4 q4.txt**
  or via: Webcms3 > exams > Final Exam > Q4 submission > Make Submission

End of Question