

Elijah M.
CS 410
HW 1

1)
a) $.90 \cdot 0 + .10 \cdot \frac{1}{1000} \text{ (secs)}$
 $= \boxed{\frac{1}{10000} \text{ seconds}}$

b) $.70 \cdot 0 + .25 \cdot 0 + .5 \cdot \frac{1}{1000}$
 $= \boxed{\frac{5}{10000} \text{ seconds}}$

It is more advantageous to use 8 KB blocks as it is on average 4ms faster

2)
a) Primary keys:
branch: branch_name
customer: customer_number
loan: loan_number
borrower: customer_number

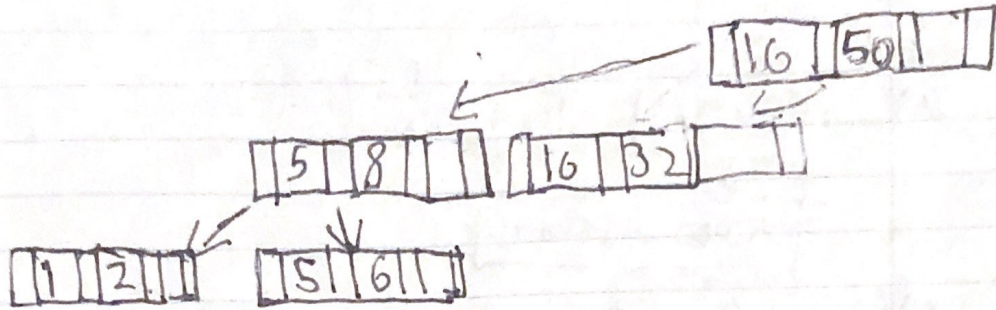
b) A superkey for customer is {customer_number, customer_name} because it sufficiently identifies the customer

c) customer_number in borrower is a foreign key referencing customer

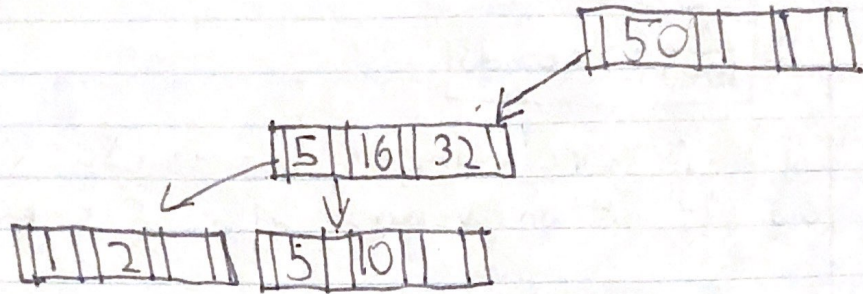
d) If you delete the associated customer to the loan then it would violate the constraint in borrower

3)

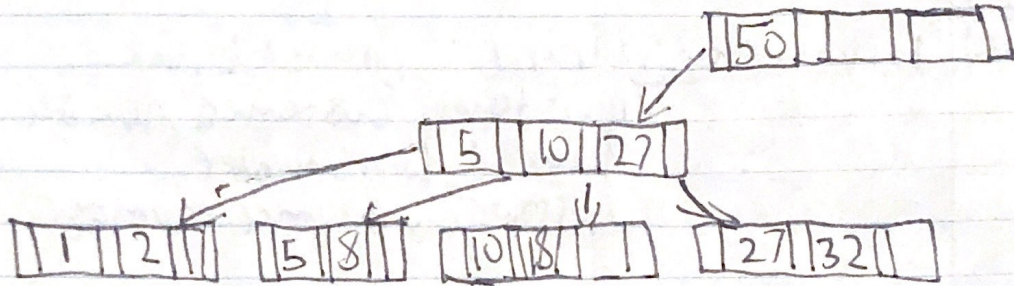
a)



b)



c)



d)

