



Virtual University

About Us

CS604
Solved Final Term Paper 4

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Year
2017

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the Name of Allāh, the Most Gracious, the Most Merciful

Paper Pattern

MCQS 40 each 1 mark
Short 4 each 2 marks
Short 4 each 3 marks
long 4 each 5 marks

Question No : 1 of 52	Marks: 1 (Budgeted Time 1 Min)
A -----system collects physically separate, possibly heterogeneous, systems into a single coherent system, providing the user with access to the various resources that the system maintains	
Answer (Please select your correct option)	
<input checked="" type="radio"/> Distributed	WWW.VirtualAcademyLive.com
<input type="radio"/> Real-time	
<input type="radio"/> Single user	
<input type="radio"/> Time-sharing	
Made by: Waqar Siddhu	
Question No : 2 of 52	Marks: 1 (Budgeted Time 1 Min)
The process of switching from one process to another is called -----	
Answer (Please select your correct option)	
<input checked="" type="radio"/> context switching	WWW.VirtualAcademyLive.com
<input type="radio"/> scheduling	
<input type="radio"/> quantum period	
<input type="radio"/> latency	
Made by: Waqar Siddhu	

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

Variable names are ----- addresses

Answer (Please select your correct option)

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☐ Physical

☐ Relocatable

☐ Relative

☒ Symbolic

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

The set of all logical addresses generated by a program form the -----of a process.

Answer (Please select your correct option)

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☐ None of the given options

☒ Logical address space

☐ Process address space

☐ Physical address space

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

Physical memory is broken down into fixed-sized blocks, called----- and Logical memory is divided into blocks of the same size, called -----

Answer (Please select your correct option)

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☒ Frames, pages

☐ Pages, Frames

☐ Frames, holes

☐ Holes, segments

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

-----is the separation of user logical memory from physical memory

Answer (Please select your correct option)

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☐ Virtual Memory



☐

☐ None of the given options

☐

☐ ROM

☐

☐ Physical memory

☐

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____ allocation scheme free frames are equally divided among processes

Fixed allocation

In this scheme free frames are equally divided among processes

Answer (Please select your correct option)

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☒ Fixed Allocation

☐

☐ Propotional Allocation

☐

☐ Priority Allocation

☐

☐ None of the given options

☐

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is created by the system when a symbolic link is created to an existing file, allowing you to rename the existing file and share it without duplicating its contents

Answer (Please select your correct option)

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☐ Ordinary File

☐

☒ Link File

☐

☐ Directory

☐

☐ Character-special file

☐

Made by: Waqar Siddhu

Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ algorithm selects the request with the minimum seek time from the current head position

The SSTF algorithm selects the request with the minimum seek time from the current head position

Answer (Please select your correct option)

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Scan

☐

SSTF

☒

Look

☐

C-Look

☐

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

The Operating system is a layer of software between _____ and _____

Answer (Please select your correct option)

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Hardware, software application

☒

Kernel, hardware

☐

Dos, Windows

☐

Windows, Kernel

☐

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

Wrong use of wait and signal operations (in context with semaphores) can cause _____ problem(s)

Answer (Please select your correct option)

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Mutual Exclusion

☐

Deadlock

☐

Bounded Waiting

☐

All of the given options are correct

☒

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

The process of holding at least one resource and waiting to acquire additional resources that are currently being held by other processes is known as _____.

Answer (Please select your correct option)

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☐ Mutual exclusion

☒ Hold and wait

☐ No preemption

☐ Circular wait

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

The problem of Deadlocks can be solved by _____ method(s).

Answer (Please select your correct option)

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☐ Deadlock prevention

☐ Deadlock avoidance

☐ Allowing deadlock and recovery

☒ All of the given

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

The most important property of the working set is its _____.

Answer (Please select your correct option)

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☐ delay

☐ thrashing

☐ time

☒ size

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Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the library files are linked at load time.

Answer (Please select your correct option)

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☐ Static Linking

☒ Dynamic Linking

☐ Non of these

☐ both of these

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Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

Intel 80386 used paged segmentation with _____ level paging.

Answer (Please select your correct option)

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☐ One

☒ Two

☐ Three

☐ Four

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Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

When the process tries to access locations that are not in memory, the hardware traps the operating system. This is called as _____.

Answer (Please select your correct option)

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☐ Paging

☐ Segmentation

☒ Page Fault

When the process tries to access locations that are not in memory, the hardware traps the operating system (page fault).

☐ Page replacement

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____ frame allocation scheme free frames are equally divided among processes

Answer (Please select your correct option)

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☒ Fixed

☐ Proportional

☐ Priority

☐ All of the given

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

ln -s command is used to create a _____ link

Answer (Please select your correct option)

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☒ Soft

☐ Hard

☐ Soft or Hard

☐ None of the given options

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Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

The major advantage of multi-programming system is

Answer (Please select your correct option)

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☒ CPU utilization increases

☐ Jobs can be completed quickly

☐ The operating system keeps several jobs in memory simultaneously

☐ All of the options are correct

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

The main disadvantage of semaphore is -----

Answer (Please select your correct option)

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☐ Context switching

☒ Busy waiting

The main disadvantage of the semaphore discussed in the previous section is that it requires **busy waiting**

☐ Synchronization

☐ None of the given options

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

A set of processes are said to be in ----- condition if each process in the set is waiting for an event that only another process in the set can cause (including itself).

Answer (Please select your correct option)

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☐ Mutual exclusion

☒ Deadlock

☐ Release

☐ Lock

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Deadlocks can be described more precisely in terms of -----

Answer (Please select your correct option)

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☐ Directed Graph

☐ Critical path

☒ Resource allocation graph

Deadlocks can be described more precisely in terms of a directed graph called a system **resource allocation graph**

☐ Mixed graph

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Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

Which command, displays permissions and some other attributes for prog1.c in your current directory?

chmod 700 ~ Set permissions on home directory to 700
chmod 744 ~/file..... Set permissions on ~/file to 744
chmod 755 ~/directory... Set permissions on ~/directory 755
ls -l ~ Display permissions and some other attributes for all files and

Answer (Please select your correct option)

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☒ ls -l prog1.c

directories in your home directory

ls -ld ~ Display permissions and some other attributes for your home directory

☐ ls -d prog1.c

ls -l prog1.c Display permissions and some other attributes for prog1.c in your

current directory

☐ ls file prog1.c

ls -ld ~/courses Display permissions and some other attributes for your home directory

☐ ls -l prog1.c /Directory

Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

A modification of free-list approach in free space management is to store the addresses of n free blocks in the first free block is known as _____.

Answer (Please select your correct option)

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☐ counting☐ linked list☐ bit vector☒ grouping

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Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

Files that start with a ----- in UNIX/Linux directory structure are known as hidden files .

Answer (Please select your correct option)

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☒ . (dot)☐ # (hash)☐ / (slash)☐ ~ (tilt)

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Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

The -----system call is used to open or create a file.

Answer (Please select your correct option)

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☒ open()

The open() System call

The open() system call is used to open or create a file. Its synopsis is as follows:

☐ read()

☐ write()

☐ close()

Made by: Waqar Siddhu

Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is the name of the technique that is designed to get rid of deadlocks by changing the specifications of the system.

Answer (Please select your correct option)

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☒ Deadlock avoidance

not sure

☐ Deadlock prevention

☐ Deadlock

☐ Deadlock free

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Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

Linux is a version of

Answer (Please select your correct option)

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☐ Windows

☐ Solaris

☒ Unix

☐ Mac

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Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

Memory can be protected by using

Answer (Please select your correct option)

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- ☐ Base register and program counter
- ☐ Base register and memory address register
- ☐ Base register and Limit register
- ☐ Limit register and program counter

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Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

Round robin is very good for _____ where response is an important issue

Answer (Please select your correct option)

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- ☐ Scope
- ☐ Batch system
- ☒ Time sharing system
- ☐ not sure
- ☐ None of the given

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Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

Semaphore can be used for solving _____

Answer (Please select your correct option)

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- ☒ Wait & signal
- ☐ Deadlock
- ☐ Synchronization
- ☐ Priority

Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

In one of the deadlock prevention methods, impose a total ordering of all resource types, and require that each process requests resources in an increasing order of enumeration. This violates the _____ condition of deadlock

Answer (Please select your correct option)

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- ☐ Mutual exclusion
- ☐ Hold and Wait
- ☒ Circular Wait
- ☐ No Preemption Right

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Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is NOT a valid deadlock prevention scheme?

Answer (Please select your correct option)

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- ☐ Release all resources before requesting a new resource
- ☐ Number the resources uniquely and never request a lower numbered resource than the last one requested
- ☐ Never request a resource after releasing any resource
- ☐ Request and all required resources be allocated before execution

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Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ page replacement algorithm suffers from Belady's anomaly.

Answer (Please select your correct option)

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- ☐ LRU
- ☐ MRU
- ☒ FIFO not sure
- ☐ LIFO

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Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

Thrashing _____.

Answer (Please select your correct option)

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- ☐ Reduces page I/O
- ☒ Decreases the degree of multiprogramming
- ☐ Implies excessive page I/O
- ☐ Improve the system performance

Made by: Waqar Siddhu

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

In memory management , a technique called as paging, physical memory is broken into fixed-sized blocks called _____.

Answer (Please select your correct option)

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- ☐ Pages
- ☒ Frames
- ☐ Blocks
- ☐ Segments

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Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

Where does the swap space reside ?

Answer (Please select your correct option)

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- ☐ RAM
- ☒ Disk
- ☐ ROM
- ☐ On-chip cache

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Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ happens when a dynamic memory allocation algorithm allocates some memory and a small piece is left over that cannot be effectively used.

Answer (Please select your correct option)

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☐

Fragmentation

☐

Segmentation

☐

External Fragmentation

☒

Internal Fragmentation

not sure

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Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following statements is true for the Banker's algorithm?

Answer (Please select your correct option)

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☐

It cannot be used for a system with many resources, each of which is unique with no multiple copies.

☒

It is used to detect deadlock.

☐

An unsafe situation will always lead to a deadlock.

☐

It is not applicable when many users share a resource simultaneously.

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Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

Give one disadvantage of Dynamic Loading? Give your answer with respect to Main memory Management

Answer (Please click here to Add Answer)

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Normal Arial 12 B I U

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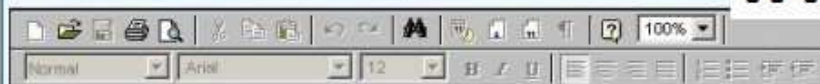
Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

There are two dependent processes in Linux \Unix operating system on same machine. How can these processes communicate among themselves?

Answer ([Please click here to Add Answer](#))

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Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

Let us consider an example of frame allocation:

Number of free frames = 64

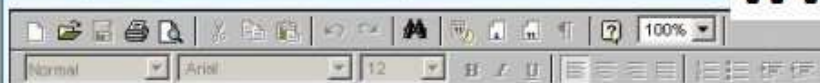
Number of processes = 3

Process sizes: P1 = 10 pages; P2 = 40 pages; P3 = 127 pages

Discuss how many free frames will be put in the free frames list by using Fixed Allocation?

Answer ([Please click here to Add Answer](#))

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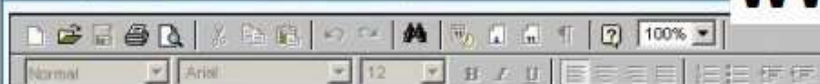
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

Virtual Memory is the separation of user logical memory from physical memory. State Virtual Memory makes programming either easy or difficult?

Answer ([Please click here to Add Answer](#))

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Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

List one advantage and one disadvantage of using a large block size to store file data.

Answer ([Please click here to Add Answer](#))

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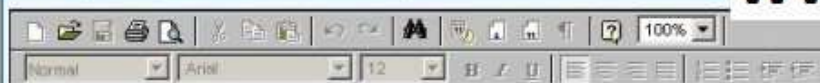
Question No : 46 of 52

Marks: 3 (Budgeted Time 6 Min)

What is Mounting? Name two types of mounting. Give your answer with respect to File System?

Answer ([Please click here to Add Answer](#))

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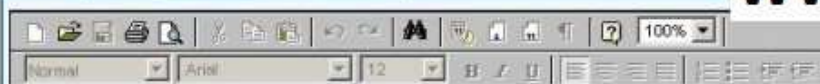
Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

How does a "system call" help the operating system?

Answer ([Please click here to Add Answer](#))

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Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

If a process takes an average page fault service time of 20 milliseconds and a memory access time of 100 nanoseconds, then the effective access time in nanoseconds is?

Answer ([Please click here to Add Answer](#))

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Made by: Waqar Siddhu

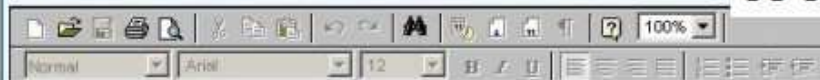
Question No : 49 of 52

Marks: 5 (Budgeted Time 10 Min)

What is the advantage of Dynamic Loading? Give your answer with respect to Main Memory Management.

Answer ([Please click here to Add Answer](#))

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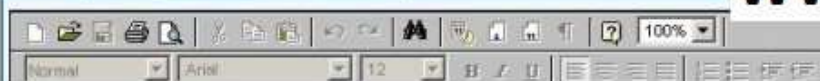
Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

What is the command for mounting in UNIX, describe mounting in UNIX.

Answer ([Please click here to Add Answer](#))

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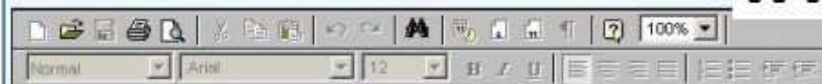
Question No : 51 of 52

Marks: 5 (Budgeted Time 10 Min)

Do you think that layered approach in operating system is better than monolithic approach? Give reasons to support your answer.

Answer ([Please click here to Add Answer](#))

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Question No : 52 of 52

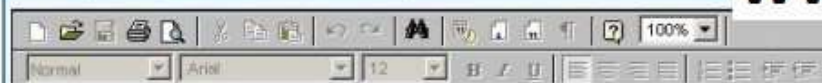
Marks: 5 (Budgeted Time 10 Min)

Write a code or pseudo code by using monitor

- i) To deposit money in a bank account
- ii) To withdraw money from a bank account.

Answer ([Please click here to Add Answer](#))

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