Übungen Wirtschaftsinformatik

Bitte bereiten Sie die Hausaufgabe einzeln oder in der Gruppe **VOR** der Übung vor.

Die Ergebnisse werden zu Beginn der Übung von allen Gruppen eingesammelt.

Erfolgreiche Teilnahme =

1. Abgabe der Dokumentation der Hausaufgaben zu Beginn der Übung +
2. Erfolgreiche Erarbeitung und Präsentation der Aufgaben während der Übung

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Übung 2: Hausaufgabe (1)

Hausaufgabe

Aufgabe 1: Umwandlung von Zahlen:

1. Stellen Sie die Zahl 365_{10} im Dual-, im Oktal- und im Hexadezimalsystem dar

2. Stellen Sie die Zahlen 110100101_2 und 6473_8 im Dezimalsystem und im Hexadezimalsystem dar

3. Stellen Sie die Zahl -89 im Einerkomplement dar. Für was verwendet man des Einerkomplement? Was ist der Nachteil dabei?

Aufgabe 2: Video Fallstudie Walmart Takes On Amazon: A Battle of IT and Management Systems

Video 1: How Wal-Mart is moving the needle on e-commerce

https://www.youtube.com/watch?v=mLGt_GPyPFU

Video 2: Wal-Mart To Acquire Jet.com For $3.3B --Closing the E-commerce Gap

https://www.youtube.com/watch?v=WxQXvmnfCaw

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1) $365 : 2 = 182 \, R1 \qquad \Rightarrow (111101)_2$
$182 : 2 = 96 \, R0$
$96 : 2 = 48 \, R0$
$48 : 2 = 24 \, R0$
$24 : 2 = 12 \, R0$
$12 : 2 = 6 \, R0$
$6 : 2 = 3 \, R0$
$3 : 2 = 1 \, R1$
$1 : 2 = 0 \, R1$

$365 : 8 = 45 \, R5 \qquad \Rightarrow (555)_8$
$45 : 8 = 5 \, R5$
$5 : 8 = 0 \, R5$

$365 : 16 = 22 \, R13 \qquad \Rightarrow (16D)$
$22 : 16 = 1 \, R6$
$1 : 16 = 0 \, R7$

Einer

$-89 : 2 =$

$2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \qquad \dfrac{16 \cdot 16}{16}$

96

1

2) $(110100101)_2$

(positions above: 8 7 6 5 4 3 2 1 0)

Binär in Dezimal

$= 1\cdot2^8 + 1\cdot2^7 + 0 + 1\cdot2^5 + 0 + 0 + 1\cdot4 + 0 + 1\cdot0^1$

$= 256 + 128 + 32 + 4 + 1$

$= (421)_{10}$

$= 421$

Binär in Hexadezimal

$0011'0100'0101$

$= (1A5)_{16}$

Nachteil:
- keine eindeutiges 0
  → einmal negativ & positiv

1)

$(6473)_8$

(positions above: 3 2 1 0)

$= 6\cdot8^3 + 4\cdot8^2 + 7\cdot8^1 + 3\cdot8^0$

$= 3387$

$(6473)_8$

$= (110\ 100\ 111\ 011)_2$

$= 1101'0011'1011$

$= (D3B)_{16}$

3) $-89 : 2 = 44\ R1 \Rightarrow 1\ 101\ 100\ 1$

$\ \ 0\ 010\ 011\ 0$ } Inversion

$44 : 2 = 22\ R0$

$22 : 2 = 11\ R0$

$11 : 2 = 5\ R1$

$5 : 2 = 2\ R1$

$2 : 2 = 1\ R0$

$1 : 2 = 0\ R1$

$= 2^1 + 4 + 2^5$

$= 38$

Summary:

In what promises to be the retail battle of the decade, Walmart and Amazon are going head-to-head for the retail consumer dollar. Walmart brings to the fray the largest physical retail presence in the U.S., and the world. But it has lacked a powerful online presence. Amazon brings to the fray the largest online retail presence in the United States, and is second only to Alibaba in China. But Amazon lacks a physical footprint in retail commerce. Walmart is moving towards an omnichannel approach that combines online and offline retail, while Amazon is emphasizing same-day delivery, local drop-off boxes, and may well introduce local physical stores in the future.

Case:

Traditional retail in the United States, the kind you find at the malls, and urban department stores, is in trouble. The revenues of very large retailers such as Walmart, Macys, Kohls, Sears, and Nordstrom from retail sales at physical locations have all been relatively flat for many years. Target, Macys, Sears, JCPenny, and others have closed hundreds of stores.

The much bigger threat to traditional retail is coming from online retail, mostly Amazon, that has gobbled up the lion's share of online retail (almost 40% of all online retail), and has been growing at astounding rates. Apparel and electronics are among the largest sales categories for online retailers, so the physical stores and the online giant all compete selling the same goods.

Traditional retailers have spent over a billion dollars in the last decade trying to become online retailers, and meet consumers wherever they want to buy, online, or at the store. It's called an "omnichannel" strategy: using multiple channels like physical stores, the Web, and mobile apps to sell products. Many traditional large retailers such as Walmart, Macys, and Costco, have wound up in the top ten online retail rankings. But so far the omnichannel strategy has not been especially successful in keeping up with Amazon's growth.

In what promises to be the online battle of the decade, the two biggest players, the heavy weights, Walmart and Amazon, are going head to head for the consumer dollar. In a broader sense, it's the online-business model versus the physical- department-store business model which was invented by Macy's

in 1870. But to be fair to the traditional retailers who have developed their online and mobile sales channel, it's more accurate to say it's the omnichannel model versus the pure-online digital model of Amazon.

Here's how the two heavyweights shape up. Walmart's revenues in 2019 were about $525 billion (the largest Fortune 500 company), it had earnings of about $15 billion, and e-commerce sales of $28 billion (around 5% of total sales revenue). Walmart has about 5,200 stores of all kinds in the U.S. In 2020, Walmart's market value was in the area of $400 billion. Its sales growth in 2019 was 1.9%, but its online sales grew by almost 40% in 2019, in part because of its purchase of Jet.com, but also due to its investment of hundreds of millions of dollars in e-commerce operations, and omni-channel e-commerce. Walmart employs about 2.2 million people (1.5 million in the U.S. alone), making it the largest employer in the world and the U.S.

Amazon's revenues in 2019 were $280 billion, up 20% from the previous year, and the firm rose to be the 2nd largest Fortune 500 firm, just behind Walmart. It generates nearly 40% of all e-commerce retail revenues in the United States. In 2019, Amazon had earnings of $11.6 billion, and e-commerce sales of $140 billion. Revenue from its third-party marketplace sellers added another $54 billion. Amazon also generated over $35 billion in revenue from its Amazon Web Services (AWS) cloud platform. AWS is a highly profitable non-core business for Amazon, and accounts for a majority of its operating income. In 2020, Amazon's market value was about $1.5 trillion

The retail battle of the decade shapes up as a contest between a giant traditional retailer that is growing very slowly, and has a small but rapidly growing online presence, versus the largest online retailer which is growing very rapidly, and has a very small physical store presence. Both companies have significant financial assets, and nearly limitless credit, to build or acquire whatever capabilities they choose. Walmart needs to develop new systems and capabilities both in-house, and through acquisitions. In 2016 Walmart bought the startup Jet.com, a small but fast-growing Amazon competitor. (In 2020, Walmart announced that it would discontinue Jet after previously integrating its retail, technology, marketing, analytics, and product teams into Walmart's own online business.) Amazon has opened a few physical book stores, and acquired the Whole Foods grocery store chain in the U.S.

Quelle: Laudon/Laudon 2021

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Übung 1: Hausaufgabe (3): Fallstudie
Walmart Takes On Amazon: A Battle of IT and Management Systems (2)

Videos 1 and Video 2 describe Walmart's senior management strategy for developing a competitive online presence. The outcome will in part be determined by how well and how fast Walmart can develop a competitive logistics system to compete with Amazon.

The Instructional Videos for this chapter describe how both Walmart and Amazon are developing their fulfillment systems, and their plans to compete on delivery and fulfillment.

Questions:

1. What are the three key assets that Walmart can leverage (build on) to compete with Amazon and other online retailers?

2. What is Walmart's e-commerce strategy?

3. Why isn't Walmart worried about the channel conflict between its online sales and its store sales?

4. Why is Walmart in-sourcing the development of its online operation, in part by acquiring technology companies rather than outsourcing development to low-cost countries and other domestic firms?

5. Why did Walmart acquire Jet.com?

6. How does Walmart's fulfillment operation differ from Amazon's?

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1.) I: größter Offline Kette in US ✓

II: größte Privatlieferant ✓

III: Investement: Investieren Millionen Dollars, obwohl sie Verluste machen

III: Logistik:

2.) - multi-channel Strateg

   ↳ E-Commerce & Offline

   - niedrigste Kosten

3) „1 Kunde = 1 Walmart"

   - Walmart wird nur als ein Unternehmen angesehen

   - Walmart kombiniert offline und online Vorteile

     z.B. Black-Friday: Nachbestellen von Waren durch Logistik

4) - faster reaction to technology trends
    - Neue technologische Entwicklung fürs ganze Unternehmen
    - Können Resourccen auf Unternehmen anpassen

5) - to close gap between Amazon
    ↳ qualified ∨ personal, innovative ideas
      IT

6) - Strive to fail
   - not profitable

   - Store as physical distrubition place and
     customer interaction
   (↳ 10% products come from the store)

Übung 2: Aufgaben

Aufgabe 1: Videofallstudie Walmart Retail Link Supply Chain

Analysieren Sie die aktuelle Wettbewerbssituation von Walmart anhand der Wettbewerbskräfte nach Porter, zeigen Sie für jede der Kräfte Status, Chancen und Risiken für Walmart auf. Illustrieren Sie Ihre Ergebnisse in präsentierbarer Form (PowerPoint/Prezi etc.)

Aufgabe 2: Komplementärdarstellung und Rechenoperationen

1. Entwickeln Sie den Algorithmus, mit dem jede unecht gebrochene Dezimalzahl (z. B. 10.25) in eine Dualzahl konvertiert werden kann. Wenden Sie den Algorithmus für die Zahl 10.1 an.

2. Führen Sie jeweils eine Addition und eine Subtraktion im B-Komplement (Zweierkomplement) für folgende Zahlen durch:
   a)$23_{10} - 178_{10}$, Berechnung mit Basis 2
   b) $1765_{10} - 7689_{10}$, Berechnung mit Basis 10

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