**Assignment1**

**Course Code = COMP100 – 001**

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ASSIGNMENT PART-A

**1. Acme Builder’s Inc. has worked out that the wiring of an average house requires 45m of 14AWG wire. If a contractor has to wire 5 houses, what length of wire will be needed?**

Sample Calculation:

Total length required= 45\*5 =225m

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| lengthOfWire,  numberOfHouses | lengthRequired = lengthOfWire \* numberOfHouses  Algorithm:   1. Prompt and accept lengthOfWire. 2. Prompt and accept numberOfHouses. 3. Calculate total length of wire required = lengthOfWire \* numberOfHouses. 4. Display lengthRequired. | lengthRequired. |

**2. Burnaby Farms wants to estimate the cost of fertilizing their fields for the coming year. Each hectare of cultivated land requires 15kg and they intend to work 300 hectares.**

Sample Calculation:

It can not be solved because it does not mention the cost of fertilizer per kg.

Assumption: cost of fertilizer per kg.

Total fertilizer required = 15\*300 kg = 4500kg

Total cost of fertilizing = 4500 \* 2 = $9000

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| amountOfFertilizer, totalHectares, costOfFertilizer | fertilizerRequired = amountOfFertilizer \* totalHectares,  costOfFertilizing= fertilizerRequired \* costOfFertilizer.  Algorithm:  1. Prompt and accept amountOfFertilizer.  2. Prompt and accept totalHectares.  3. Prompt and accept costOfFertilizer.  4. fertilizerRequired = amountOfFertilizer \* totalHectares.  5. costOfFertilizing izing= fertilizerRequired \* costOfFertilizer.  6. costOfFertilizing. | costOfFertilizing |

**3. Cherry Entertainment Corp. is looking into the profitability of hosting MMA XXII at the Rogers Center. The sale of tickets, broadcasting rights and advertising will gross approximately $2 million. How much profit  
will Cherry Entertainment Center make if Rogers Centre cost $800, 000?**

Sample Calculation:

Profit = Gross from sale – Rogers centre cost = 2000000 – 800000 = $1200000

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | output |
| grossFromSale,  centreCost | profit= grossFromSale -centreCost  Algorithm:  1. Prompt and accept grossFromSale.  2. Prompt and accept centreCost.  3. Calculate profit = grossFromSale - centreCost.  4. Display profit. | profit |

**4. Delta Airlines estimates that the fuel efficiency of a Boeing 747 jet is 12 liters per km. If the price of aviation fuel is $1 per liter, how much would it cost the airline to fly to New York and back from Toronto?**

Sample calculation:

Fuel estimate of airplane in liter = 12 l/km

Rate of fuel per liter = $1 /l

Travelling distance of airplane = 1579.2 km

Rate of fuel per km = Rate of fuel per liter \* Fuel estimate of plane in liter = 1\*12 =$12

Price for distance travelled = Distance \* Rate of fuel per km= 1579.2 \* 12 = $18950.4

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| fuelEstimate,  rateOfFuelLit,  travellingDistance | Algorithm:   1. Prompt and accept fuelEstimate 2. Prompt and accept rateOfFuelLit 3. Prompt and accept travellingDistance 4. Calculate rateOfFuel = rateOfFuelLit \* fuelEstimate 5. Calculate price = travellingDistance \* rateOfFuel 6. Display price | price |

**5. Estelle’s Grocery is having a back to school sale of up to 50% off on most food items. The price of potatoes is 11₵ per kg. A plastic bag costs 5₵. What will the total cost (potatoes and bag) if someone buys 25kg of potatoes?**

Sample calculation:

Sale discount = 50%

Price of potatoes = 11₵/kg

Cost of plastic bag = 5₵

Weight of potatoes = 25kg

Total cost of potatoes (25 kg) = Weight of potatoes \* Price of potatoes =25 \* 11 = 275₵

Discount amount on total cost = Sale discount \* Total cost of potatoes = 50% \* 275 = 137.5₵

Total cost of potatoes after discount = Total cost of potatoes – Discount amount on total cost = 275 -137.5 = 137.5₵

Total cost of potatoes after discount with bag = Total cost of potatoes after discount + Cost of plastic bag = 137.5 + 5 = 142.5

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| saleDiscount,  priceOfPotatoes,  costOfBag,  weight | Algorithm:   1. Prompt and accept saleDiscount 2. Prompt and accept priceOfPotatoes 3. Prompt and accept costOfBag 4. Prompt and accept weight 5. Calculate costOfPotatoes = weight \* priceOfPotatoes 6. Calculate discount = saleDiscount \* costOfPotatoes 7. Calculate costAfterDiscount = costOfPotatoes – discount 8. Calculate total = costAfterDiscount + costOfBag 9. Display total | total |

**6. Fancy Jewelers is located in the Scarborough Town Center on the second floor near to Wal-Mart. In their Boxing week sale earrings were priced at $20 per pair. If Narendra wants to get a pair for as many females in his family as he can. How many pairs can he get if he has $125? [You may assume that there are more females in his family than he can buy earrings.]**

Sample calculation:

Price of earrings per pair = $20

Current fund = $125

Pairs of earrings that can be bought = Current fund / Price of earrings in sale per pair = 125 / 20 = 6.25 = 6 pair (Since, 1 pair of earrings costs $20, the 0.25 will be returned to Narendra)

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| pricePerPair,  fund | Algorithm:   1. Prompt and accept pricePerPair 2. Prompt and accept fund 3. Calculate earingsPair = fund / pricePerPair 4. Display earingsPair | earingsPair |

**7. Gerard the Plumber charges $1.25 per meter for pipe installation. Each join cost 90₵. How much will Gerard charge for a job that is 12m with 4 joins?**

Sample Calculation:

Total charges for the job = (installation rate \* total meter) + (join cost rate \* total joins) = ($1.25 \* 12 m) + 4 \*(0.9) = $15.00 + 3.6 = $18.60

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| rate  JoinRate  meter  joins | Total charges= (rate\* meter) + (joinRate \* joins)  Algorithm:  1. Prompt and accept rate.  2. Prompt and accept joinRate.  3. Prompt and accept meter  4. Prompt and accept joins.  5. Calculate total charge for the job = (rate \* meter) + (joinRate \* joins).  6. Display charges | Total charges |

**8. Last year at the CNE, the Halls family bought 50 ride tickets. If the Polar Express, the Ferris wheel, the High drop and the Water fall requires 15, 10, 12 and 9 tickets respectively, how many tickets will remain at the end of the day?**

Sample Calculation:

Total of ride tickets = Total of tickets bought – Total tickets bought - (Polar express tickets + Ferris wheel tickets + High drop tickets + Water fall tickets) = 50 - (15+ 10+ 12+9) = 50 - 46 = 4.

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| totalTickets,  polarTickets,  ferrisTickets,  dropTickets,  waterFallTickets | ticketsRemaining= totalTickets  –( polarTickets  + ferrisTickets + dropTickets + WaterFall tickets)  Algorithm:  1. Prompt and accept totalTickets.  2. Prompt and accept polarTickets.  3. Prompt and accept ferrisTickets.  4. Prompt and accept dropTickets.  5. Prompt and accept WaterFall tickets.  6. Calculate total tickets remaining = totalTickets  – ( polarTickets + ferrisTickets  + dropTickets + waterFallTickets  ).  7. Display ticketsRemaining. | ticketsRemaining |

**9. Isabelle’s Confectionary sells a packet of Maynard’s sourdrops for 25₵. Each packet contains approximately 30 candies. How many packets will Sarah get if she has $3?**

Sample Calculation:

The packet rate = $0.25

Total packets = money amount /packet rate

= $3/ $0.25 = 12 packets

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| packetRate  moneyAmount | packets = moneyAmount / packetRate  Algorithm:  1. Prompt and accept packetRate.  2. Prompt and accept moneyAmount  3.Calculate total packets = moneyAmount / packetRate  4.Display packets | packets |

**10. Jake’s Towing Services works out of the Markham/Finch area. They charge $5.50 per km for towing in addition to a flat service fee of $18. What would be the cost of towing a Toyota RAV 4 from Morningside/Ellesmere to McCowan/Sheppard?**

Sample Calculation:

$5.50 per km for towing  
Distance from Morningside/Ellesmere to McCowan/Sheppard = 7.5 km (assumption)

Cost of towing = total distance \* towing rate per km + flat service rate = 7.5 \* 5.50 + $18 = $59.25

Input Output Table:

|  |  |  |
| --- | --- | --- |
| Input | Processing | Output |
| towingRate,  serviceFee,  distance | cost= distance \* (towingRate + serviceFee)  Algorithm:  1. Prompt and accept towingRate.  2. Prompt and accept serviceFee.  3. Prompt and accept distance.  3. Calculate cost of towing = total distance \* towingRate + serviceFee.  4. Display cost. | cost |

COMP 100 (PART\_B)

1. After surveying a number of new-home electrical installations, Kelly Builder’s Inc. has worked out what the length of wire a typical house would require. Write a program that will prompt the user for the average  
   length required for a home and the number of houses to wire. The program will then calculate and display the total length of wire required for the specified number of houses.

Ans=

Sample Calculation:

totalLength= averageLength \* numberOfHouses

= 50m \* 20 = **1000m**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Length of wire for average home  Number of houses to wire  Processing:  Total length of wire required= length of wire for average home \* Number of houses to wire  Output:  Total length of wire required  Algorithm:  1. Prompt and accept length of wire for average home  2. Prompt and accept number of houses to wire  3. calculate total length of wire required by multiplying length of wire for average home by Number of houses to wire.  4. Display total length of wire required. | //input  int averageLength ;  int numberOfHouses;  //processing  //output  int totalLength;  Process:  Console.Write(“Enter the length of wire for average home: “ );  averaageLength = Convert.ToInt32(Console.ReadLine());  Console.Write(“Enter the number of houses to wire: “ );  numberOfHouses = Convert.ToInt32(Console.ReadLine());  totalLength= averageLength \* numberOfHouses ;  Console.WriteLine($”Total length of wire require for {numberOfHouses} houses is {totalLength}”) ; |

1. Loreto Farms wants a program to estimate the cost of fertilizing their fields for the coming year. The program will prompt the user for the rate of fertilizer application (how many kg per hectares), the unit price of fertilizer (dollars per kg) and the size (hectares)of land to be cultivated and then calculate and display the cost.

Ans=

Sample Calculation

totalCost= 15\*30\*300

**=$ 135000**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Rate of fertilizer application  Unit price  Total size of land  Processing:  Total cost = rate of fertilizer application\* unit price \*total size of land  Output:  Total cost  Algorithm:  1. Prompt and accept rate of fertilizer application.  2. Prompt and accept unit price of fertilizer.  3. prompt and accept total size of land.  4.calculate total cost by multiplying rate of fertilizer application, unit price and total size of land  5.Display total cost. | //input  int fertilizerApplicationRate ;  double unitPrice ;  int totalLand ;  //processing item:  //output  double totalCost ;  //process  Console.Write(“Enter the rate of fertilizer application: “) ;  fertilizerApplicationRate= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the unit price of fertilizer: “) ;  unitPrice=Convert.ToDouble(Console.Readline()) ;  Console.Write(“Enter the total size of land: “) ;  totalLand = Convert.ToInt32(Console.ReadLine()) ;  totalCost= rate of fertilizer application\* unit price \*total size of land  Console.WriteLine($”The cost of fertilizing for coming year is {totalCost : c}”); |

1. Montgomery Entertainment Corp. is looking into the profitability of hosting MMA XXII at the Rogers Center. Write a program that will calculate and display the profit that will result from hosting such as  
   event. The program will calculate the income (you must prompt for each of the following) from the sale of tickets, broadcasting rights and advertising and subtract the cost of renting the Center.

Ans=

Sample Calculation:

profit = 15000 – 10000 = **$5000**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Sales  Cost  Processing:  Output:  Profit  Algorithm:  1. Prompt and accept sales  2. Prompt and accept cost  3. Calculate profit by subtracting cost from sales.  4. Display profit. | //Input:  int sales ;  int cost ;  //processing item:  //output  Int profit;  //Process:  Console.Write(“Enter the sales: “) ;  sales = Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the cost: “) ;  cost = Convert.ToInt32(Console.ReadLine()) ;  profit = sales – cost ;  Console.WriteLine($”The profit from hosting event is {profit :c}”) ; |

1. Narendra Airlines would like a program that will calculate and display the cost of flying an aircraft between various locations. Write a program that will compute the cost which is based on the fuel efficiency (amount of fuel used for each km travelled) of the aircraft, the unit price of fuel and the length of the journey.

Ans=

Sample Calculation:

totalCost= 5\* 1.92\*3600

**= $ 34560**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Fuel consumption per km  Unit price  Length of journey  Processing:  Total cost = Fuel consumption per km\*Unit price\*Length of journey  Output:  Total cost  Algorithm:  1.Enter and accept Fuel consumption per km  2. Enter and accept unit price  3.Enter and accept length of journey  4. calculate total cost by multiplying Fuel consumption, Unit price and length of journey.  5. Display total cost. | //input:  int fuelConsumption ;  double unitPrice ;  int lengthOfJourney ;  //processing item:  //output  double totalCost ;  //process:  Console.Write(“Enter the fuel consumption per km: “) ;  fuelConsumption= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the unit price of fuel: “) ;  unitPrice= Convert.ToDouble(Console.ReadLine()) ;  Console.Write(“Enter the total length of journey: “) ;  LengthOfJourney= Convert.ToInt32(Console.ReadLine()) ;  totalCost= fuelConsumption\*unitPrice\*lengthOfJourney ;  Console.WriteLine($”Total cost is {totalCost :c}”) ; |

1. Othello’s Grocery is small business located in the West Hill area. They would like a program that will prompt the user for the weight and price of the produce, the price and capacity of plastic bag and then calculate and display the total cost of the sale. You may assume that all customers will require bags.

Ans=

Sample calculation: 20 \* 50\*2\*5 =**$10000**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Weight of produced in kg  Produced price per kg  Price of bag  Capacity of bag  Processing  Total cost of sale = weight of produced in kg\*Produced price per kg\*Price of bag\*Capacity of bag  Output  Total cost of sale  Algorithm  1. Prompt and accept weight of produced in kg.  2. Prompt and accept produced price per kg.  3. Prompt and accept price of bag.  4. Prompt and accept capacity of bag.  5.Calculate total cost of sale by multiplying weight of produced in kg, Produced price per kg, Price of bag and Capacity of bag.  6.Display total cost of sale. | //input:  int weightProducedInKg ;  int producedPricePerKg ;  int priceOfBag ;  int bagCapacity ;  //processing item  //output:  int totalCost ;  //process  Console.Write(“Enter the produced weight in kg: “);  weightProducedInKg= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the produced price per kg: “);  producedPricePerKg= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the price of bag: “);  priceOfBag= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the capacity of bag: “);  bagCapacity= Convert.ToInt32(Console.ReadLine()) ;  totalCost= weightProducedInKg\* producedPricePerKg\* priceOfBag\* bagCapacity ;  Console.WriteLine($”The total cost of sale is {totalCost :c}”); |

1. Parker would like to get each of the females in his family the same gift for the holidays. He has an amount of money which he is willing to use up completely. Write a program that will prompt him for the price of the item and the amount of money that he has and then calculate and display the most items that he can buy and the left-over money. (There are 2 outputs for this question).

Ans=

Sample Calculations:

numberOfItem= 1000/30 =33.3 ( 33 items)

moneyUsed= 30\*33= $990

moneyLeft= 1000-990 =**$10**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Price per item  Total money  Processing :  Number of item can be bought = total money/ price per item  Money used = Price per item\*Number of item can be bought  Money left = Total money – Money used  Output:  Number of item can be bought  Money left  Algorithm:  1. Prompt and accept price per item.  2. Prompt and accept total money.  3. Calculate number of item can be bought by dividing total money by price per item.  4. calculate money used by multiplying Price per item and Number of item can be bought  5. Calculate money left by subtracting money used from total money.  6.Display number of item can be bought and money left. | //input:  int pricePerItem ;  int totalMoney ;  //processing item  int moneyUsed ;  //output:  int numberOfItem ;  int moneyLeft ;  //process  Console.Write(“Enter the price per item: “) ;  pricePerItem = Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the total money: “) ;  totalMoney = Convert.ToInt32(Console.ReadLine()) ;  numberOfItem= totalMoney/pricePerItem ;  moneyUsed= pricePerItem\*numberOfItem;  moneyLeft = totalMoney-moneyUsed;  Console.WriteLine($”The most items Parker can buy is {numberOfItem}”);  Console.WriteLine($”He would have {moneyLeft : c} left”) ; |

1. Quincy “The Plumber” bills customer for pipe installation based on the length as well as the number of joins of the job. Build a program that will prompt for length rate, join rate, the length, the number of join and calculate and display the total cost.

[cost = (length \* lengthRate) +(numberOfJoins \* joinRate)]

Ans=

Sample Calculation:

lengthCost=$5 \*40 =$200

joinCost= $7 \* 20= $140

totalCost= 200+140 = **$340**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Length rate  Join rate  Length  Number of joins  Processing :  Length cost = length rate \* length  Join cost = join rate \* number of joins  Total cost= Length cost + Join cost  Output:  Total cost  Algorithm:  1. Prompt and accept length rate.  2. Prompt and accept join rate.  3. Prompt and accept length.  4. Prompt and accept number of joins.  5.Calculate length cost by multiplying length rate and late.  6. Calculate Join cost by multiplying join rate and number of joins.  7. Calculate total cost by adding length cost and join cost.  8.Display total cost. | //input:  int lengthRate ;  int length ;  int joinRate ;  int numberOfJoins ;  //processing item:  int lengthCost ;  int joinCost ;  //Output:  int totalCost ;  //process:  Console.Write(“Enter the length rate: “) ;  lengthRate = Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the length: “) ;  Length= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the join rate: “) ;  joinRate = Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the number of joins: “) ;  numberOfJoins= Convert.ToInt32(Console.ReadLine()) ;  lengthCost = lengthRate \* length ;  joinCost = joinRate\*numberOfJoin ;  totalCost = lengthCost + joinCost ;  Console.WriteLine($”The total cost is {totalCost : c} “) ; |

1. Last year at the CNE, the Robert Family brought ride tickets. If the Polar Express and the Ferris wheel cost 5 and 3 tickets respectively. Write a program that prompts the user for the amount of ticket bought, the number of times each of the two rides were taken and then calculate how many tickets will remain at the end of the day.

Ans=

Sample Calculation:

polarCost= polarRide\*polarTickets = 3\*5 = 15

ferrisCost= ferrisRide\*ferrisTickets = 4\*3 = 12

ticketsUsed= polarCost + ferrisCost = 15+12 = 27

ticketsRemaining= ticketsBought – ticketsUsed = 30-27 = **3**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Tickets bought  Polar ride  Ferris ride  Polar tickets  Ferris tickets  Processing:  Polar cost = Polar ride \*Polar tickets  Ferris cost = Ferris ride\* Ferris tickets  Tickets used= Polar cost + Ferris cost  Tickets remaining= Tickets bought – Tickets used  Output:  Tickets remaining  Algorithm:  1. Prompt and accept tickets bought.  2. Prompt and accept Polar ride.  3.Prompt and accept Ferris ride.  4. Accept Polar tickets.  5.Accept Ferris ride.  6.Calculate Polar cost by multiplying Polar ride and Polar tickets.  7. Calculate Ferris cost by multiplying Ferris ride and Polar tickets.  8. Calculate tickets used by adding Polar cost and Ferris cost  9. Calculate Tickets remaining by subtracting tickets used from total tickets.  10. Display tickets remaining. | //input:  int ticketsBought ;  int polarRide ;  int ferrisRide ;  //processing item:  int polarTickets = 5 ;  int ferrisTickets= 3 ;  int polarCost ;  int ferrisCost ;  int ticketsUsed ;  //output:  int ticketsRemaining ;  //process:  Console.Write(“Enter total tickets bought: “) ;  ticketsBought= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the number of polar ride: “) ;  polarRide= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the number of ferris ride: “) ;  ferrisRide = Convert.ToInt32(Console.ReadLine()) ;  polarCost= polarRide\*polarTickets ;  ferrisCost= ferrisRide\*ferrisTickets ;  ticketsUsed= polarCost + ferrisCost ;  ticketsRemaining= ticketsBought – ticketsUsed ;  Console.WriteLine($” {ticketsRemaining} tickets will remain at the end of the day “) ; |

1. Stephanie’s Confectionary wants a program that will prompt the user for the price of the candy and the amount of money she would like to spend and then calculates and display the amount of candies that can be purchased as well as the amount of money remaining after purchase.

Ans=

Sample Calculation:

totalCandies= totalMoney/pricePerCandy = 50/6 = 8.22 (8 candies)

moneyUsed= totalCandies\* pricePerCandy= 8\*6 = $48

moneyRemaining= totalMoney – moneyUsed = 50-48 = **$2**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Price per candy  Total money  Processing:  Total candies= Total money/Price per candy  Money used= Total candies \* Price per candy  Money remaining = Total money – Money used  Output:  Money remaining  Algorithm:  1. Prompt and accept price per candy.  2. Prompt and accept total money.  3. Calculate total candies that can be bought by dividing total money by price per candy.  4. Calculate money used by multiplying total candies and price per candy.  5. Calculate money remaining by subtracting money used from total money.  6. Display money remaining. | //input:  int pricePerCandy ;  int totalMoney ;  //Processing item:  int totalCandies ;  int moneyUsed ;  //Output:  int moneyRemaining ;  //process:  Console.Write(“Enter the price per candy: “) ;  pricePerCandy = Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the total money : “);  totalMoney = Convert.ToInt32(Console.ReadLine()) ;  totalCandies= totalMoney/pricePerCandy ;  moneyUsed= totalCandies\* pricePerCandy ;  moneyRemaining = totalMoney – moneyUsed ;  Console.WriteLine($”{totalCandies} candies can be bought.”) ;  Console.WriteLine($”{moneyRemaining : c} is remaining after purchase.”) ; |

1. Thomas’ Towing Services would like an application that calculates and display the cost of a towing job. The cost is based on the towing rate, the distance as well as a flat service rate. The service rate is the same  
   regardless of the towing distance and it is always applied in any job.

Ans=

Sample calculation

totalCost= towingRate \* totalDistance \* SERVICE\_RATE

= 20.5 \* 400\* 2.25 =**$18450**

|  |  |
| --- | --- |
| **IPO information** | **C# statement** |
| Input:  Towing rate  Total distance  Service rate    Processing:  Total cost = Towing rate \* Total distance \* Service rate  Output:  Total cost  Algorithm:  1. Enter and accept towing rate.  2. Enter and accept total distance.  3. Accept service rate  4.Calculate Total cost by multiplying Towing rate , Total distance and Service rate.  5. Display Total cost. | //input:  double towingRate ;  int totalDistance ;  const double SERVICE\_RATE ;  //processing item:  //output:  double totalCost ;  //process:  Console.Write(“Enter the towing rate: “);  towingRate = Convert.ToDouble(Console.ReadLine()) ;  Console.Write(“Enter the total distance : “) ;  totalDistance= Convert.ToInt32(Console.ReadLine()) ;  Console.Write(“Enter the flat service rate : “) ;  SERVICE\_RATE = Convert.ToDouble(Console.ReadLine()) ;  totalCost = towingRate \* totalDistance \* SERVICE\_RATE ;  Console.WriteLine($”The cost of towing job {totalCost : c}“); |